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MURRAY-HEISS, CLEVELAND, O.

JANUARY

1907

VOL. XVII

NO. 1

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Providence, R. I.

Advanced Bee Culture!

One of the most difficult tasks of my life is that of writing an advertisement of Advanced Bee Culture. Be as modest as I can, it still smacks of egotism—sounds like a parent praising his own child. If the book had been written by some other man, the writing of an advertisement would be comparatively easy. However, even at the risk of laying myself open to ridicule, of becoming a laughing-stock, I am going to *forget* for *once* that I am its author and publisher, and write as though of another's work.

When 18 years old I visited an apiary in swarming-time; saw bees hanging in great golden-brown clusters from the swaying boughs of the old apple tree; saw the snowy white combs growing as by magic; saw the waxen cells filled with nectar, and inhaled that *sweetest* of all perfumes—the odor from a bee-hive in harvest time. I was filled through with enthusiasm. Here was a business that was most truly

The Poetry of Life.

I was that day born a bee-keeper. There was no longer any doubt as to what should be my life occupation. I at once began buying bee books and journals, and visiting bee-keepers, and studying the business from every possible standpoint. It was six years later before I was able actually to engage in the business, but I then possessed as thorough a theoretical knowledge of bee-keeping as does a young physician of medicine when he begins to practice.

All this was 30 odd years ago; and, since then, I have

Run the Whole Gamut

of bee-keeping, time and time again. I have practiced all sorts of methods of artificial increase. I have battled with the difficulties of natural swarming; I have produced tons and tons of comb honey; have tried my hand at extracted-honey production; I have reared and sold thousands and thousands of queens; I have exhibited bees and honey for 15 consecutive years at from one to half a dozen State fairs, I have wintered bees in all sorts of ways, out doors and in, in cellars and buried in clamps; I have attended nearly all of the conventions of a National character;

Visited Hundreds Bee-keepers

in their homes, scattered from ocean to ocean and from the lakes to the gulf. I have read all the books and journals; for nearly twenty years I have published the Review, enjoying the confidence and correspondence of bee-keepers scattered all over this country; In short, I have been a wide-awake, enthusiastic, practical, actual, work-a-day, bread-and-butter bee-keeper all of these years, making a living for myself, wife, and little ones, *out of bees.*

ADVANCED BEE CULTURE is the

Ripened Fruit

of all these years of varied experience; it is the crowning effort of my life. I look upon it as the best piece of work that I have ever done, or, perhaps, ever *will* do. It is written from a bread-and-buter standpoint. It teaches how to make a living—yes, more than that,

Make Money out of Bees.

From all of these sources I have mentioned, from my own experience, and that of the men with whom I have associated, I have described the mast advanced, the *best* methods, of keeping bees for *profit.* I begin at the opening of the year, and go through the season, step by step, touching brifly but clearly and concisely, upon all of the most important points, showing their relationship one to the other, and how, joined together, they make a perfect whole. If I could have had this book twenty years ago, and followed its teachings, I might now have

Been a Rich Man.

I say it fearlessly, because I *know that it is true,* that no practical bee-keeper can afford not to read it. The courage, enthusiasm, and inspiration alone will be worth more to him than the cost of the book, to say nothing of the more practical instructions. Many a man fails from a lack of these very useful qualities, and the perusal of Advanced Bee Culture will do much to help him in this respect.

One more point: A dozen years ago I took up photography as a hobby, as a pastime. I have studied it just as you have studied bee-keeping. I have read journals and books on the subjects, attended the conventions, etc. I have lugged a large camera, along with me all over the United States and Canada, and used it with loving care. Advanced Bee Culture contains the

Gems of this Collection

of all these years—a collection that is simply unapproachable in the line of apiculture.

The book is beautifully printed with clear large type, on heavy enameled paper. It is bound in cloth of a bluish drab, and the front cover embellished with a green vine of clover, a “

Bee of Gold

sipping nectar from the snowy-white blossoms of the clover. Taken all in all, it is a beautiful book.

If the advertising that I have done in the past has not convinced you that you need the book, then the fault is in the *advertising;* and, for this once, I have cut loose and said just what I think of the book, just as I would of some other book—I may never do it again.

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Just at present I am offering all of the back numbers of this year free to all who send $1.00 for 1907. In other words, you can get the Review for 1906 and 1907, and this book for only $2.00! I know of no way in which you can get so much helpful, practical, valuable apicultural information for so little honey.

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Vol. XVII. JANUARY, 1907. No. 1.

THE EAGERLY INDUSTRIOUS BEE (?).

Latham and Miller Lock Horns in Defence of Their Opinions Involving Fine Points.

ALLEN LATHAM.

ON PAGE 235 Mr. Arthur C. Miller replies to my criticism of what he offered on page 184 about drone-comb-building. Yes, Mr. Miller did most courteously submit his reply to me, and I readily assented to its being printed, for who would not after reading the reply? I could confidently rest my case here, feeling assured that Time with its increased store of bee-lore would vindicate the position which I still hold, not having the least consciousness that Mr. Miller has driven me from it.

But in his vain search for arguments to support his untenable position Mr. Miller gets off the track and proceeds to slander most basely our beloved and respected worker-bee. I cannot refrain from coming to the defence of the bee; and here again I find myself compelled to take issue squarely against Mr. Miller, whose close study of the bee and whose various contributions to bee-literature have on more than one occasion provoked in me only admiration. Mr. Miller is, however, human, and like the rest of us does err once in a while.

The first reading of the sentence, "In the aggregate the bees of a colony accomplish much, but individually the bee is the personification of laziness," caused a strange mixture of emotions. The slander in the statement hurt not a little, while the remarkable logic amused. How a company of personifications of laziness can accomplish much is beyond my powers as a logician to comprehend.

The fact would seem to be—and let me say that I am in the dark somewhat here—that a few students of bee-lore undertook to keep tabs on some worker-bees, and, finding much apparent idleness, jumped at extreme conclusions. Thus did Anthony Trollope write once upon a time about Americans. Thus today do most Americans form erroneous ideas about Chinese, basing their conclusions upon a casual acquaintance with one or two washee-washee men.

When a number of keen and tried

observers keep faithful and sleepless tab on each and every one of the workers of a normal colony of a good strain of bees, carrying out this work through a period of some four weeks during which time there is a natural honey flow, and then show by an accurate averaging of results that the individual bee is the personification of laziness, when that has been done, I say then the more conservative of us will unwillingly accept the verdict. At present, feeling assured that such careful and searching work never has been done, I for one must enter my emphatic protest against this slander of the bee.

Did those watchers know what each bee they watched was about; did they know that each bee watched was a normal, healthy bee; did they know that work was waiting of a sort suited to the age of the bee watched? Unless they can say yes to each and all of these questions then their conclusion is good for naught.

I stand ready to prove from my own observations, repeated again and again, that the individual worker is the personification of eager activity, that what she does she does heart and soul.

Bees do lie dormant in cells, and they do rest hours at a time, and they do appear to be lazy. Is Mr. Miller lazy because he does not run when he takes his meals, is he lazy because he lies in bed to sleep, is he lazy because he sits many and many an hour watching his "personifications of laziness" do nothing (?) ? Looking at these acts pure and simple, not knowing what is back of them, a casual observer would form the hasty conclusion that the bee and Mr. Miller are lazy in the extreme. But we should be only fair to the bee, for we know that Mr. Miller is as active and nervously eager as a healthy Cyprian worker-bee.

In the last paragraph offered by Mr. Miller we can heartily agree with what he says until we reach the word "but," it is there that he proceeds to make a statement which he must back up with the strongest kind of proof. For that we must have evidence, evidence which will stand sifting and will convince. Otherwise it is up to Mr. Miller to offer a most humble apology to Miss Bee; and I here and now throw down the guantlet to Mr. Miller, determined to see that apology forthcoming at no very distant date.

Norwich, Conn.

THE RIDICULOUSLY LAZY BEE.

ARTHUR C. MILLER.

ACCEPTING Mr. L's challenge I reply as follows: "In the aggregate the bees of a colony accomplish much as man views it, but the individual is the personification of laziness."

Go out on the street and watch a gang of men. Slowly a pick rises, poises and with much deliberation is dropped again. Then the pipe is filled and lit, then another stroke, and thus it goes along the line. We do not call such men "eagerly industrious," and yet at the end of the day the gang has made quite a hole in the ground—"has accomplished much." But it might have done more had its members been "eagerly industrious." We may go farther in our comparisons of a colony of bees with mankind and consider how small a proportion of the human family are "producers" and how small a part of the waking hours of mankind as a whole is devoted to production. Less than one-third of the population are employed in gainful occupations. Perhaps this with a consideration of "much" as a relative term will aid Mr. L. in the adjustment of his logic. He acknowledges that "bees do lie dormant in cells and they do rest hours at a time." If they do that when the fields are burdened with nectar and the combs have ample room for freshly-gathered loads, can we call them "eagerly industrious?"

Bees have been continuously watched as Mr. L. desires, and all evidence points to the truth of the assertion that instead of improving each shining hour the field bees average only from four to six trips a day. Stated in another way, we may say that one field bee gathers in one day enough to support herself and perhaps five others, adults or larvae. In a populous colony we may consider the eating larvae population as ten thousand, and the adult population as, perhaps, sixty thousand. Hence, if fifteen thousand bees labor in the fields they will support the colony and a little to spare. Of the adult population probably thirty thousand are honey gatherers; hence we have fifteen thousand workers who will each gather five times as much as she needs and it will all be surplus. All of which is purely speculative and is said only to show that the individuals of colony need not make many trips each in order to make the aggregate results appear "much."

To put it into practical advice, make your colonies big, just as big as you can.

Providence, R. I.

"You may raise money enough to tunnel a mountain, but you cannot raise money enough to hire a man who is minding his own business."

ANOTHER LETTER FROM THE DEACON.

Hardscrabble Favors Us with another Epistle—the First in Many Months.

HARRY, OLD FELLOW, how are you? Glad that you have to rest now and then, gives folks a chance to talk to you. News? Oh, I don't know of much. Smoke up? Sure! The fragrant weed is a great solace, but I have urged my boys to never learn to use it.

Well, National affairs go along in about the same old way. The "ins" and "outs" are still at it. At San Antonio the Independents were conspicuous by their absence. The "bunch" ran things as usual and called the action of the meeting "vindication." Ho! Ho! Ho! Feathered ostriches are not the only kind which hide their heads in the sand and then feel "out of sight." Say, if there is no advantage in being in control of the National why do the supply men stick so, and strive so artfully, to keep their friends in power? Hadn't thought of it? Hump! that comes of keeping so all fired busy. Sure there are some fine boys in office, none finer. But some of them are too easy and so blamed obliging they'd hate to pain the devil. Ah, well, if the members are content, let 'er rip.

What ructions have been going on since our last chat, and how many pet theories you have bowled over. Time has made some ravages in your ranks too. The Progressive it seems finally went down and out, and the Rural was too good to live. Pity, that for Putnam worked hard and deserved better treatment. He got out a manly, progressive and independent paper and it is a tough reflection on the intelligence of the boys that they did not rally better for its support. D'ye spose they have so long mused on wishy washy stuff that their palates are spoiled?

Think of it, the United States with its hundreds of thousands of bee-keepers sort of half support four little papers while Germany has eleven, Austria six, and France twenty-one, little Belgium has eight, Italy four, Norway, Sweden, Russia, Roumania, Spain, Chili, Canada one each, Switzerland two, and Great Britain four. And the United States bee-keeper struts about with his chest puffed out and tells what a big smart chap he is. Faugh! Go to.

"Be not wise in your own conceits."

See you later, Harry. Ta ta.

John.

THE BEE INSPECTORS' MEETING AT SAN ANTONIO.

Interesting Information on Maladies that Afflict the Bee.

THE MEETING of bee inspectors, San Antonio, Tex., Nov. 12, has come and gone. The attendance of about fifty persons represented the whole country. No one who attended thought the time ill spent. On the contrary everyone there felt at the close of the afternoon session that it was a day most profitably passed; in fact, many expressed themselves that it was the best bee meeting at which it had been their privilege to be present.

Dr. Phillips, of the Bureau of Entomology, Department of Agriculture, Washington, D. C., called the meeting to order and in his opening remarks gave the history of European foul brood in this country and also gave a synopsis of the bee disease work under consideration by the Bureau of Entomology. He then called upon Dr. G. F. White, of the Department of Agriculture, who gave an exhaustive description of the methods of working out disease germs. Beginning at the start he so carefully and fully explained his methods of work that everyone felt that he thoroughly understood every detail in the investigation.

Dr. White said in part: "If your cattle were being poisoned in the pasture and your neighbor's cattle were not, you would make a careful survey of your neighbor's farm and see what plants were growing in his pasture. Then you would make an examination of your own farm and would subtract the plants found in your neighbor's pasture from those found in yours, and those left in your own lot you would suspect as being the ones causing the poisoning. It is so with the investigation of a disease. A germ is a plant and we study the flora of the healthy apiary and also of the diseased apiary and by this process of elimination and by the examination of a great many specimens we arrive at the cause of the disease."

The European foul brood is caused by Bacillus alvei described by Cheyne and published in 1885. The cause of American foul brood is found to be a germ hitherto undescribed but called by Dr. White Bacillus larvae. To isolate this germ Dr. White used a medium the foundation of which was a bouillon made from the larvae of the bees. No one else ever used this medium and so no one else ever discovered the cause of American foul brood.

These germs are slender, rod-like bodies that grow in length and finally break into two individuals. This division occurs every thirty minutes so that beginning with one, in one-half hour you will have two, in one hour four, in one and one-half hours eight, in two hours sixteen, two and one-half hours thirty-two, three hours sixty-four, three and one-half hours one hundred and twenty-eight, and four hours two hundred and fifty-six individuals. When the larva dies the germ goes into the spore or resting stage. It begins to thicken in the center or near one end and finally becomes a spherical body. This spore form is the resistant form and is the one which we have to fight in the field.

Dr. White then explained in detail the methods used in isolating one germ and in making cultures for study. He also explained how the different medium or soils were made and how one germ would show a certain character on one medium or soil, for the medium is to the germ what the soil is to the plant, while another germ would show on entirely different character. So by taking many different kinds of medium and studying each organism on each medium it is possible to identify them.

Both American and European foul brood exist in Europe. These terms were given them because the European foul brood was worked out by Cheyne in Europe and American foul brood was worked out in America.

Many samples of pickled brood have been examined but no cause has been found for it. This is also true of bee paralysis and we are still in the dark as to the cause and treatment of these two diseases.

Dr. Phillips then gave a detailed description of American and European foul brood as it appears in the field. He stated that when Cheyne made his investigation he had, according to his own statement, but one specimen which was brought him by Cheshire. Since both diseases exist in Europe it is quite possible that the one specimen was what we now call European foul brood, especially since Cheyne describes the specimen as "watery." To the casual observer the diseases bear a similarity of appearance.

Dr. Phillips stated that at the present time European foul brood exists in New York, New Jersey, West Virginia, Connecticut, Massachusetts, Vermont, Pennsylvania, Ohio, Indiana, Illinois, and Michigan. The European foul brood is usually the more virulant of the two diseases, but on the other hand sometimes disappears of its own accord. He then gave the history of bee disease investigations, and taking each investigator in turn, showed what was the probable cause which led him to arrive at his conclusions. It is interesting to note that the earliest theory was that a parasitic fly laid its eggs in the body of the diseased larvae.

Mr. N. E. France, the veteran bee disease inspector of America, then read a paper on the History of Bee Disease Inspection in Wisconsin. This paper was one of the gems of the meeting. Mr. France stated that many apiaries where foul brood once existed, after having been treated were the means of paying off the mortgage on the farm or of building a new home for the owner. Other apiaries under different care, though once profitable are now entirely wiped out or reduced to a few colonies.

Dr. Phillips read a paper from Mr. Charles Stewart, of New York, and also one from Mr. Fred A. Parker, of Lompoc, Cal. Both papers were valuable and interesting and both clearly demonstrated the value of thorough and careful work on the part of the inspector.

Mr. J. M. Rankin, of the Bureau of Entomology, who is stationed at Chico, Cal., gave a short talk relating to inspection on the Pacific coast. He stated that he did not know of a case of European foul brood in California, but that the American foul brood was much more virulant there than in the east or north. Few inspectors in California now recommend the shaking treatment as the time required to treat the disease is of more value than the bees destroyed. The method fast coming into favor is that of boiling up the diseased bees and comb in a large tank. Bee inspectors, he said, are born, not made. It is an easy matter to learn to detect the disease and to effect a cure. Any man of ordinary intelligence can do this, but it is only a small part of bee inspection. The difficult part lies in handling the bee-keeper and, without antagonizing him, get him to comply with the law because he sees the advantage it brings him in so doing.

The practice of carrying an instrument with which to test the dead brood is not a good one. Such an instrument in the hands of an ordinary man is bound to spread infection. The best method is to carry a pocket full of wooden tooth picks and after testing a diseased cell either push the tooth pick into the comb to mark the spot or drop it down the mouth of the smoker and dispose of it. "I do not yet know of one single inspector," said Mr. Rankin, "who is in the work for the money he is getting out if it. They have the good of the industry at heart, to the very last man. Some of them make mistakes, but they all deserve the hearty support of every bee-keeper and every journal. No one has a right to publicly criticise them. If he is incompetent the law provides for his removal from office and this should be done, but to publish criticisms on the mistakes of an inspector is to wilfully harm the industry."

Mr. L. H. Scholl gave a talk on

1 Photo by Mrs. G. H. Johnson.

APIARY OF MR. G. H. JOHNSON, E. WOODSTOCK, CONN.

A Charming Picture, Typical of New England, With its Apple Trees, Meadows and Bees.

inspection in Texas and the methods employed. Shaking has not proven satisfactory and the line they now work on is to sulphur the diseased colony at the entrance with a smoker and then burn the infected combs.

Mr. Smith, Inspector for Illinois, described his method of treatment which was briefly that of shaking once on starters of foundation and being careful not to allow any robbing or dripping of honey. He stated that in nine out of every ten yards treated he had been successful.

Mr. George W. York, Editor of the American Bee Journal, then offered a motion that a telegram of thanks be sent to Dr. L. O. Howard, Chief of the Bureau of Entomology, as an expression of gratitude felt by the inspectors of the United States for the assistance of his bureau in the investigation of bee diseases. The motion was unanimously carried.

Dr. Phillips summed up the meeting in a few very interesting and instructive remarks. He stated that he thought it had been clearly demonstrated that no one treatment could be successful in all localities and under all circumstances. The treatment must be adapted to the locality and the surrounding conditions.

All who were privileged to attend the meeting felt that it was a day most profitably spent and that such meetings should continue. Bee inspection must become a science and the contact of one inspector with another, comparing methods and conditions cannot but broaden him and better fit him for one of the most important of all branches of apicultural work.

"The services which the community will most readily pay for, it is most disagreeable to render. You are paid for being something less than a man."

APIARY OF GEO. H. JOHNSON.

MR. JOHNSON has an apiary of 15 colonies and makes a success of it. A number of photographs received by The Bee-Keeper indicate that care and neatness characterize his methods throughout.

On May 19th he bought one swarm that had issued a couple of days previous. From this swarm he sold 57 pounds of honey at 25 cents per pound, clearing $9.25 profit for the season.

2 Photo by Mrs. G. H. Johnson.

G. H. JOHNSON, E. WOODSTOCK, CONN., TAKING DOWN A SWARM OF BEES.

Although extracted honey may be bought in the maket at 11 to 13 cents, Mr. Johnson sells all of his product to a druggist at 20 cents. The druggist prefers to pay this price and know that he is getting exactly what he wants—pure, well ripened and clean goods. Herein is an admirable example for the consideration of many small producers who have been in the habit of shipping to the city markets and thereby placing their honey in competition with the carload crops of the big Western specialists, and consequently receiving a low price, while splendid markets near at hand are overlooked. It pays to cultivate special trade—to put up high-class goods and to create a demand for our specialty in the smaller towns.

Photo by Pearl C. Richardson.

WISWELL-RICHARDSON APIARY, WEST MEDFORD, MASS.

For comments on pictures, see "Our Cozy Corner" department elsewhere in this number.—H. E. Hill.

If all bee-keepers were willing to have their bees examined by a competent inspector we would have no need of a compulsory law. That's just it; if no one ever did anything wrong, we would have no use for law.

THE WISWELL-RICHARDSON APIARY.

ALMOST in the heart of the residential section of West Medford, Mass, is the neat and picturesque Wiswell-Richardson apiary, partial views of which are shown herewith. Mr. and Mrs. Richardson and the latter's mother Mrs. Wiswell are practical and progressive bee-keepers of the "advanced school," having cut loose from old traditions and gone ahead on independent lines.

That they have been remarkably successful hardly need be said. Mr. R's. skillful handicraft is in evidence in all the appointments of workshop and apiary. Mrs. R. is the secretary of the Massachusetts Society of Bee-Keepers.—A. C. Miller.

OBSERVATION HIVES.

Details to be Observed in the Construction of a Really Practical Device for Studying the Bees' Home Life.

A. C. MILLER.

THE OBSERVATION hives commonly offered for sale were apparently designed by someone very ignorant of the habits and needs of bees. The putting of "ventilation holes" in the top, each end and bottom of one of these small hives is an error fatal to the prosperity of the colony which occupies it.

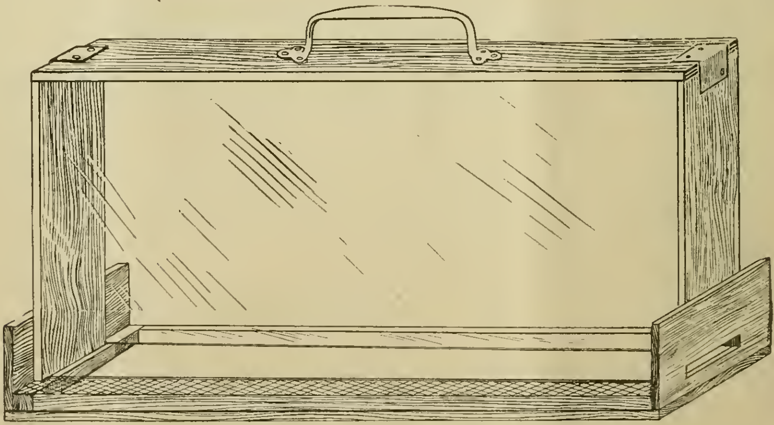
Bees need warmth and freedom from drafts, but in a hive made as above and placed as these hives most always are—in a window—there is a strong draft through every one of those holes at nearly all times. If the wind is towards the hive there is a strong draft into the room, as may be seen by holding a lighted match before the holes. If the wind is from some other direction the draft will be found to be the other way even though the other windows and doors of the room are closed, and every time one of them is opened the draft is increased. By the opening of a door I have seen the bees near the inside of the hive entrance blown out through it as if shot out. Obviously it will be nearly if not quite impossible for the bees to maintain a condition of prosperity or present a normal state for the keeper's observation. Then the glass permits rapid radiation which either causes rise or fall of the temperature within despite the bee's efforts to the contrary. To overcome this very apparent trouble and more nearly produce a supposed essential (darkness) for the thrift of the colony, users of the hives put wooden shutters against the glass.

5 Photo by Pearl C. Richardson.

WISWELL-RICHARDSON APIARY, WEST MEDFORD, MASS.

Many of the commercial hives are so designed or so flimsily made that they readily break, or by yielding when handled break the glass. Another fault of most observation hives, large and small is the impossibility of feeding the bees without the risk of daubing them or the hive with the food.

The passage of air through the hive should be absolutely under the control of the bees. Much or little ventilation should be at their command. Light or darkness have no effect provided there is no sudden change from one to the other. They work equally well in natural or artificial light if the light does not give heat, hence direct sunlight or direct rays from a lamp, gas jet or electric light increase the temperature within the hive. Reflected or diffused light does not so act to any perceptible degree, therefore, if it is desirable to study the bees by night arrange the lights thus and preferably start the light before daylight wanes, then there will be no possible interruption of the bees' labors.



MILLER'S OBSERVATION HIVE.

ESSENTIALS FOR GOOD OBSERVATION HIVES.

First, have the hives strong enough so handling will not crack the glass.

Second, have at least two, and preferably three panes of glass on each side, separated by a quarter inch space, made virtually air-tight, but not puttied or cemented in.

Third, have all ventilation at the lower edge of one side.

Fourth, have a "tunnel" connecting the hive with the open air, which may or may not be a part of the hive. It need be but two or three inches long, but should be both wider and higher than the hive entrance and should have its top covered with wire cloth. Such a "tunnel" arrangement is much better than having the hive close to the sash.

Fifth, have the frame in the single comb hive fixed so it cannot swing or slide if the hive is moved.

Sixth, have a slip of queen-excluding zinc over the entrance. It will prevent the absconding of the little colony, though that is not probable if they are properly housed and established.

Seventh, if the hive is for exhibition purposes, hence to which the bees must be confined for some time, have a space of two or three inches below the frame and have the glass come to the top of this space. Such space serves for a receptacle for dead bees, wax scraps, etc., and also gives room for the bees if they have to spread out on account of heat.

So much for the general principles. Hives for specific purposes or for use under particular conditions can be made of sundry sizes and shapes which will suggest themselves according to the ends to be met. I have found that for general convenience, safety from upsets, and for ready transportation a hive made as shown in the accompanying sketch to be most satisfactory. It will be noted that the base is much wider than the uprights, and is so designed for three purposes, stability, ventilation without draft through hive, and for feeding. The base or floor has a half inch rim along each edge on which rests, on one side of the uprights, a screen of wire cloth, and on the opposite side a sheet of glass. The use of glass is optional, wood serving as well, but glass has the advantage of giving a free view of the floor. The wire cloth side serves as a ventilator so located that no draft can hit the combs or bees except as they direct it, and also in conjunction with the wire top of the tunnel, drafts through the entrance are not of enough force to disturb the passing of the bees.

For feeding it is only necessary to invert on the wire a food-filled bottle whose top is covered with a piece of cheesecloth. If, perchance, there is any food spilt it runs through onto the hive floor where the bees quickly clean it up.

Instead of grooves into which the glass is to be slipped, movable strips to be nailed or screwed to the uprights are preferable, then, be the glass thick or thin, they can always be made to fit snugly. In my own hives these strips have the edges which come against the glass faced with black felt-like cloth. All the strips, both the vertical and horizontal, which separate the glasses and the strips which hold the outer panes in place should be painted a dull black, for the same reason that the inside of a telescope is blackened.

Having a suitable hive, however, is only part of the battle, for improperly stocked it is far from satisfactory. For the most gratifying results a new comb should be used, one which the queen has occupied for the first time. The comb should preferably be not more than half filled with brood, of which fully half should be sealed. To get a comb so stocked place a new comb next within or in place of the outer one occupied by the queen in the hive, and as soon as it is suitably stocked move it one frame farther back until part of the brood is sealed. When the comb is ready the next step is to secure proper bees, and these are comparatively young bees. An easy way to get plenty of the right sort is to take the selected comb and one other with adhering bees from the colony and place them in a hive or box by themselves, giving the bees freedom to fly. In the course of an hour or less if the day is warm all of the old stagers will have returned to their home. Then from the second comb, above referred to, shake into the temporary hive or box all the bees on it. Most of these will promptly crawl up on the selected comb, which should at once be put into the observation hive and the latter closed. In the course of fifteen minutes any queen may be given to them by merely running her in at the entrance, preceded and followed by a puff of smoke, and the entrance promptly closed. Use a young queen if possible. The hive is then moved to the house and placed in the window and the bees shortly given their freedom, the zinc queen guard being put in place to prevent absconding.

If nectar is not abundant in the fields, or if the comb is not well stocked with stores, feeding should be resorted to. Place the bottle on the side screen at the end farthest from the hive entrance. The larger mouthed the bottle, and the coarser the cloth over it, the faster they will take the food. Once well supplied with food feeding should be discontinued until the little colony is seen to be encroaching largely on its reserve. Experiments with slow and rapid feeding will quickly show the advantage of the latter.

A variation of above way of stocking an observation hive, one which the writer has used for several years and which has revealed the innermost secrets of the bees' home life, has the comb built in narrow strips about three-quarters of an inch thick placed so the cells lie parallel with and against glass. In a hive to be so used the inner glasses are but three-quarters of an inch apart. The comb strips are one and one-half inches from center to center so that we have virtually a cross section of a colony instead of a longitudinal one. By these and other arrangements it is possible to see every act of the bees. They cannot hide their innermost secrets from you provided you look with fair and unprejudiced eyes. A hive so arranged requires more or less skill to start, but once established the colony goes as normally as does any colony. It was in such a hive that I discovered how pollen was packed, how bees store and ripen nectar, how the egg hatches, larva is fed, cocoon spun, etc., etc. Photographs and detailed description for establishing colonies in these hives will appear here later.

I particularly wish to call the attention of Mr. E. R. Root and some other sceptics to these facts. He has said that it was impossible to tell what a bee did when it entered a cell because such entrance obscured the view. Perhaps so in Medina, but not in Providence.

Providence, R. I., Nov. 12, 1906.

PENNSYLVANIA STATE MEETING.

Harrisburg, Pa., Dec., 6, 1906.

Editor of American Bee-Keeper.

As you know, we intend to hold our annual meeting of the Pennsylvania State Bee-Keepers' Association, in Harrisburg, Pennsylvania, January 17th to 19th inclusive. The first meeting will be on the evening of Thursday, the 17th, and the session will close Saturday noon, the 19th. The meetings will be in the Capitol Buildings and there will be an exhibiton of bees, bee products and supplies. Upon the program there will be such prominent men as Dr. E. F. Phillips, of Washington, D. C., and Mr. Charles Stewart, Inspector of Apiaries of New York State, as well as considerable Pennsylvanian talent. Excursion rates of one and two-third cents per mile within the State have been obtained by writing to me for card orders, which we shall furnish free. Will you kindly make this announcement, as it will clear up a little mistake in the dates that I made in my former announcement to you.

Very truly yours,
H. A. Surface, President.
Pennsylvania State Bee-Keepers' Association.

Baltimore, Md., Dec. 13, 1906.

Editor American Bee-Keeper.

Your postal card in reference to honey to hand. In reply, we presume Baltimore uses less honey than any other city of its size in the United States, and there is enough of it in our own state to supply all the demand. California has been trying to introduce its honey here for several years, and, in fact, has sold some of it here, but not enogh to make it an object.

C. P. Tatum & Co.

CALIFORNIA PROSPECTS GOOD.

Chatsworth, Cal., Dec. 12, 1906.

We have just had several days of rain which is very favorable for a crop of sage honey. That is if there comes a few rains later we will be sure of a crop next year. Nothing but a long spell of unusually dry weather could prevent. In 1893-4 there was an abundance of rain in December, but scarcely any all the rest of the winter. In 1904-5 there was no rain until about the 1st of February, when it began to rain. But it was so late that sage did not have time to grow.

C. W. Dayton.

GREAT DEMAND FOR BEE STINGS.

Long Sufferers from Rheumatism Find Relief.

Royersford, Pa., Aug. 24.—J. R. Mosteller, a bee raiser, is being besieged by persons for the use of his bees for stings for the cure of rheumatism. Councilman Howard Buchanan was the first to try the remedy, and the results, he says, were so satisfactory that other persons have taken the remedy. John Anthony declares that he has been given such relief that he has dispensed with his crutches. Lewis Deegan has been aided also. A business man of Pottsdown, who suffered for years, was stung eight times by the bees, and says that he has been benefitted.

"Results from my advertisement in the American Bee-Keeper have been VERY satisfactory."—E. H. Dewey, Gt. Barrington, Mass.

REASON OR INSTINCT IN BEES.

J. E. HAND.

THE DISCUSSION between Mr. Latham and Arthur C. Miller in the November Bee-Keeper, as to why drone comb is built, is to me very interesting.

For various reasons I would like to accept Mr. Miller's theory, and perhaps could do so regarding the building of drone comb. Yet there are a thousand and one other things, that the bees do, which would seem to require even more reasoning power, than would the building of drone comb just when male bees are needed.

For instance, how about their building queen cells just when queens are needed and at no other time?

Does it require stronger reasoning powers to enable them to build drone cells just when drones are needed, than it does to build queen cells just when queens are needed?

Perhaps it is the crowded condition of the hive that compels the bees to feed the larvae one kind of food to produce a worker bee and another kind to produce a queen.

If bees are mere reflex machines, how are we to account for their making preparations for an event that is to take place a week or ten days in the future, as in preparing to swarm; and all at once destroying all their queen cells, and giving up the notion of swarming simply because the honey flow begins to decline?

If we admit that bees always build queen cells when queens are needed and at no other time, it seems to me that the argument is rather in favor of the theory of a higher order of instinct, very nearly akin to reason.

As there are higher developments of reasoning powers in the human race why should there not be a higher order of instinct in the lower animals? This is indeed a fruitful theme and one worthy of our best thought and study. The argument is not all on one side.

There is a cause for every effect in nature. Let each one study closely the nature of the bee, and go down into cause and effect, and, like the noble Bereans of old, learn whether or not these things be true.

Burmingham, Ohio.

THE BEE-KEEPING WORLD

Staff Contributors: F. Greiner, Adrian Getaz

Contributions to this department are solicited from all quarters of the earth

GERMANY.

GERMAN SALES METHODS.

Some of the bee-periodicals in Germany devote much space to advertising. It appears that many bee-keepers have honey for sale, but find no purchasers, also that there are many buyers who cannot find the honey; but it is notable that a large share of the advertisers do not give actual figures. How much more practical and time-saving it would be when advertising to say what we would be willing to take or willing to give. Honey, best white extracted, is being offered at from 16 1-2 to 19 cents per pound, package not included.

QUEENS.

"Does a queen ever mate after having laid eggs?" This question has been and is being discussed in German bee journals. Dr. Bruennich says, she may do so, and claims to have observed this. Dickel, Mulot and others say the doctor is mistaken. These authorities agree that a queen mates not before the fifth day of her life and usually begins to lay eggs not before the tenth. If a queen fails to mate, she begins to lay eggs when about five weeks old, rarely, if ever, any sooner.

There is some disagreement as to length of time required to bring a queen to maturity. Dr. Bruennich thinks that it may come about in 13 1-2 days, others hold that 15 days is the minimum.

It is useless trouble to try to cure a drone breeding colony late in the season says J. W. in Schlesw. Holst. Bztg. Better unite, he says, with a neighboring colony. (The Gleaner thinks such bees are of no value, for they are too old).

When unsuccessful, a queen will return from her flight within five minutes. If she remains longer away the chances are favorable.—Lehrm, in G. and Restff.

"THROUGH HIS HAT."

If there wasn't anything to hinder the increase of bees, no winter, no dysentery, no starvation, etc., in a hundred years, says Freudenstein, the number of bees would be so great that if all of them were in one cluster united, same would be three times larger than the globe on which we live.

DEATH OF DR. DZIERZON.

The death of Germany's greatest bee-keeper, Dr. Joh. Dzierzon, is reported in the last German bee-periodicals. He died on Oct. 26 in his 96th year. If may be said that with Dzierzon a new era in bee-keeping commenced. The invention of the movable comb hive, which he made in 1835 enabled him to unravel the mysteries of the hive and from that time on the bee hive has become an open book to the bee-keeping world.

AUSTRIA.

A FEEDING DEVICE.

Hans Kremser describes in Bienen-Vater, his handy bee-feeder as follows:

Take any wide-mouthed bottle or jar, holding one or two quarts, or more, fill it full of syrup, cover with an inverted saucer then turn jar over holding on tight. The "feeder" is now ready to be placed in an upper story or anywhere else where bees have access to it. The feed will flow from the can as fast as the bees take it from the saucer. (This feeder and the principle upon which it is built is not new but it is good).

BIG TALK, LITTLE RESULTS.

At the great bee-keepers' meeting of the Austrian and German bee-men held at Leoben, quite a little time was consumed by the veterans over the question whether there is a noticeable difference between queens reared in pre-constructed and post-constructed cells. W. Guenther said that his bees had not degenerated 'though his queens had been chiefly reared in post-constructed cells for many years. By his method a queen rearing colony was not taxed very heavily, as to feeding and nursing very much brood, and he preferred not to disturb such a colony very much during the cell-building period. It was, however, assented to that normally reared queens lived longer, were of greater longevity than those reared over worker broods. Generally speaking the discussion brought out nothing new.

HAS IT DOWN FINE.

Geo. Erker says, in Bienen-Vater, that the memory of the honey bee is of three months duration. As proof he mentions that the bees which were confined for over three months during the winter mark a new location like a young bee. During their long confinement they have forgotten everything about the location and not a bee will be lost by going to the old location in case they have been moved. The gleaner of this is not absolutely positive of this, but his long experience in cellaring bees has taught him that any changing about of colonies when bringing them out of the cellar makes no material difference. Other experienced bee-keepers claim otherwise. If they are right then the honey-bee has a longer memory than three months. Erker admits that a few individual bees in a colony may retain certain impressions beyond ten weeks' time but the large majority do not. The memory of drones is much shorter, he says.

"SAIL INTO ME."

A Honey Dew Discussion That Has Exhausted the Office Supply of Interrogation Points.

ADRIAN GETAZ.

"BUT I AM now satisfied that honey dew is a secretion or exudation from the leaves of certain kinds of trees. If any one doubts my contention let him sail into me."

This is the invitation extended to bee-keepers by Mr. T. K. Massie in the August number of the Rural Bee-Keeper.

But what does he mean by that expression, "Sail into me?"

He surely does not expect us to tell him that he is a close relation to the celebrated Baron Von Munchhausen. Or that he is a blankety-blank lawyer or something of that sort? Surely not.

He surely does not expect us to tell him that he did not look right or did not have his "specs" on, or did not have sense enough to know where to look for the "bugs" that produce it? Surely not.

Does he know that one who promulgates a new theory is the one to prove that his theory is right? And that it is not necessary that somebody else proves that he is wrong? How are we to prove that he is wrong (if he is) when he has not even told us what he means? Or what would he think of us if we were to tell him that the moon is made of green cheese and invite him to "sail into us" if he did not accept our assertions?

Does he mean for us to tell him that if nectar is secreted by the flowers or is an exudation from them it is because they are provided with organs (the nectaries) created for that purpose while the leaves do not have anything like that? To form the nectar or any other special secretion, a special organ is necessary, just like the milk given by a cow is formed in the udder and nowhere else. To say that the leaves of the plants can furnish a secretion similar to the nectar under certain circumstances is nearly as bad as to say that milk could exude from a cow's back if the "circumstances" were favorable.

Does he mean for us to tell him that it is a known fact that the plant-lice produce honey dew? That they suck the sap of the plants with a trunk or tongue similar to that of the bees, appropriate a portion of it and transform the rest into honey dew? That the honey dew is secreted or "exudated" at the other end of the body through two tubes created for that purpose? That the operation goes on very rapidly all the time? and that with suitable arrangements the honey dew thus produced can be collected and will be found identical with the drops seen on the leaves and around the trees? That the performance can be verified by any one with the help of a magnifying glass? That the lice found on the rose bushes are the easiest to observe if any one wishes to do so?

Does he mean for us to tell him that if he will examine a leaf with a strong microscope, he will find it of the same structure all over? And therefore, if the honey dew was a secretion from it, it would appear in the shape of a uniform coating all over, instead of being in big drops here and there?

If Mr. Massie will wipe off these drops, no more will be formed, while if they were a secretion, more would come as soon as the other is off.

Does he mean for us to tell him that when he sees these drops of honey dew on the tree, he will find under the leaves (not over) a few plant lice, not near enough to account for the honey dew, to be sure, but some? And if he had gumption enough to climb to the very top of that tree, he would find there on the twigs and young leaves enough lice to account for all. Provided of course, that he would succeed in getting there without falling off and breaking his neck.

Knoxville, Tenn.

A scourge of bee paralysis is said to have visited the Isle of Wight, and discouragement among the bee-keepers is general. (H.)

A Hampshire correspondent, in British Bee Journal, has observed that for nectar secretion in the clover blossom the ground temperature should be about 70 degrees, Fahr. The same writer says that the past year the bees did well—for themselves; but the bee-keeper got but a short crop.

THE

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HOW TO ADDRESS.

The home office of the American Bee-Keeper is at Falconer, N. Y., and all matters relating to subscriptions, discontinuances, changes of address, advertising or other business should invariably be addressed to the Falconer, N. Y. office.

Matters relating to the editorial department—Manuscripts, photographs, or correspondence in any way referring to articles that have been or are to be published, should be addressed to The American Bee-Keeper, Fort Pierce, Florida.

DISCONTINUANCES.

The American Bee-Keeper will be sent continuously until it is ordered stopped and arrearages, if any, are paid. Those who wish the paper discontinued at the expiration of the time for which they have paid, have only to request that it be done, and no copies will be sent thereafter.

SUBSCRIPTION RECEIPTS.

We do not acknowledge receipt of subscriptions. Your receipt of the journal is evidence of your subscription having been entered. The date printed upon the wrapper label of your paper indicates the time to which you have paid. Our subscribers will confer a favor by observing the date, as noted, and promptly renewing or requesting the paper discontinued at expiration of time paid for, as may be desired.

The editors and the publishers of The Bee-Keeper wish each of its readers a very Happy New Year, and wish for each a prosperous season.

To repair leaky hive-lids, paint heavily with lead and oil, tack canvas or other cloth snugly over the fresh paint, then paint the cloth on top thoroughly. (H.)

Is bee paralysis as it exists in Europe, Australia, America and elsewhere, the same thing? Here is another opportunity for the exercise of bacteriological skill. (H.)

Some Australian apiarists think black bees less subject to paralysis than are the Italians. Others, however, combat the claim strenuously, in Australasian Bee-Keeper. (H.)

With this number the American Bee-Keeper celebrates its sixteenth birthday, and it is as full of life, vigor, buoyancy and hope as was ever any fair maiden at "sweet sixteen." (H.)

If any of our readers have back numbers of the American Bee-Keeper or of the Rural Bee-Keeper which they would like to dispose of the associate editor would be pleased to hear from them. Address, Box 1113, Providence, R. I.

D. M. M., one of the brightest contributors to British bee literature, is the author of the following bit of terse wisdom, in the British Bee Journal: "A little business tact is often a more urgent desideratum than a profound knowledge of apiculture in answering the oft-repeated query, 'Do bees pay?' " (H.)

The editor of the American Bee Journal refers to the American Bee-Keeper as "a somewhat obscure publication." Brother York's philosophy is faulty. It doesn't necessarily follow that because the American Bee-Keeper has so effectually obscured some of his pet schemes that the publication itself is "obscure." (H.)

A Staffordshire bee-man sends the British Bee Journal samples of heather honey which was carried by the bees a distance of six miles, from the field to the hives. Heather honey, considered about the choicest of honey, is said to be so thick in body as to make extracting almost impossible. (H.)

If one desires to familiarize himself with the rules and regulations governing the enforcement of our pure food laws, he should write the United States Department of Agriculture, Washington, D. C., and request a copy of Circular No. 1, containing the "Food and Drugs Act, approved June 30, 1906." (H.)

Prof. Louis Scholl, of Texas, has a theory which would preclude from criticism the old established bee journals. The American Bee-Keeper is not quite so old as some of its contemporaries, but we think it is quite as "well established," with as solid financial backing as any of the bunch. Mr. Scholl should remember that Satan himself has been "established" quite a while. (H.)

In the Australasian Bee-Keeper, Geo. James tells of having cut off the head of a queen with his penknife, leaving her lying upon a piece of paper in the honey-house. The next day she was still living, and did not relinquish her hold upon life until the twenty-sixth hour after decapitation. Wonder if Mr. James is getting ready to advertise a "hardy strain" of stock next season. (H.)

If each of our present subscribers will send us just one new one before the 15th of September, we will begin the next New Year with sixty-eight pages, instead of thirty-six, as at present and the subscription price will remain the same. We hope to secure 4,500 new subscribers this year. Every one secured adds to the strength and influence of the journal. We shall appreciate your help. Every word of commendation is a help. (H.)

The tongue is always a seeking organ, never a giving. Besides gathering up fluids it is used in the spreading of propolis. It seems to be a veritable varnish brush for that purpose. From the frequency with which bees lick propolis and from their licking over the inner surfaces of the comb cells I have surmised that from both propolis and wax they secured something palatable. The most careful examination of the cells fails to reveal the deposit of anything by the bee during the licking process, the wax is only smoother and more burnished than before. (M.)

Never within its history has the American Bee-Keeper enjoyed such prosperity as at present. This month it enters its seventeenth year of continuous publication under most encouraging conditions. Its list of subscribers continues to grow steadily. Its staff of contributors is of the very best in the world. It is becoming the acknowledged leader as the exponent of advanced thought on apiarian questions. Its influence has become widespread and emphatic. No other American bee-paper is so extensively quoted by the foreign press. Its efficiency as an advertising medium is unexcelled, and its advertisers are appreciating the fact. Probably not less than fifteen thousand persons read The Bee-Keeper each month. If the reader appreciates our efforts to supply a high-class, illustrated bee journal for fifty cents a year he can materially aid the work by introducting The Bee-Keeper to those yet unacquainted with its merits. (H.)

"STATE AND TERRITORIAL LAWS RELATIVE TO FOUL BROOD."

This is the title of a bulletin issued in November by the Bureau of Entomology, Department of Agriculture, Washington, being Bulletin No. 61, reprinted from "The Laws against Injurious Insects and Foul Brood in the United States."

The laws as now in effect in the following states are given: California, Colorado, Idaho, Michigan, Nebraska, New Mexico, New York, Ohio, Texas, Utah, Washington and Wisconsin.

Dr. Phillips, acting in charge of apiculture at Washington, and who is doing such energetic work in behalf of bee-keeping in this official capacity, advises that copies of this bulletin will be sent to any person applying for it, but that the supply is rather limited and therefore it is preferred to send it only to those who have some use for it. (H.)

"PUSH, PLUCK AND PROGRESS."

The history of the world shows the reformer's lot to have been a hard one. The reformers have been a target for the wrath of the fossils of all ages. Their work has been impugned, their motives misconstrued and their annihilation sought at every turn by the old-school followers. But "truth crushed to earth" don't stay there, and today the world calls down blessings upon the names of those who have fought for advancement through research and the expression of honest thought of which modern civilization is the offspring.

The American Bee-Keeper is now passing through this ordeal; and, doubtless, some of its contemporaries would like to see it burned at the stake—judging from their evident bitterness. The American Bee-Keeper, however, is fighting the bee-keepers' fight. It is in the arena to stay and to win, and it will be still faithfully plugging away as the champion of apiarian rights and advancement long after oblivion shall have swallowed some of its sly and sophistical critics. (H.)

A NEW WORK ON BEE DISEASES.

It appears that the government has undertaken to supply an abundance of wholesome literature for those who are inclined to avail themselves of the opportunity and "post up" on apiarian questions of the day. The latest acquisition to the list, issued November 6th, by the Bureau of Entomology, is: Technical Series, No. 14, entitled, "The Bacteria of the Apiary, with Special Reference to Bee Diseases," by Dr. Gershom Franklin White, expert in animal bacteriology, biochemic division, Bureau of Animal Industry. This bulletin is for sale by the superintendent of documents, government printing office, Washington, D. C. Price ten cents. All remittances should be made payable to him. Stamps, personal checks, or foreign money will not be accepted in any case.

Every bee-keeper should read it. (H.)

ADVANCEMENT MUST COME THROUGH STUDY.

The articles which we have recently published on comb construction have aroused a deal of interest, partly, perhaps, because they conflict with popular beliefs and partly because they suggest new lines of experiments in practical apiculture. We have on hand some other very interesting and suggestive articles which we believe will be instructive to practical honey-producers and interesting to the studious amateurs.

The bulk of the apicultural literature of today is devoted to a discussion of the same puzzles our granddaddies struggled with, and the solutions offered are much the same. But the "solutions" are such only in name. The guesses are the same because the beliefs regarding the bees' habits are the same. The truth about the latter must be learned if we are to stop blundering along year after year in the same unintelligent and costly way.

It is costly in that the bee-keeper cannot predetermine what each colony in his apiaries will do and hence he often has to devote many profitless hours to them. "Universal panaceas" are repeatedly offered in the shape of hives and appliances, and in methods of manipulation based thereon, yet every honest bee-keeper will acknowledge that he always has more or less unprofitable colonies, that the cost of wintering is high and the death list uncertain. How can he better conditions? By learning the laws governing the actions of the bees. To help in this matter we ask that each of our readers, whenever he notices any unusual or remarkable feature of his colonies or acts of his bees to report it to the associate editor. Every little fact helps. (M.)

DRIFTING TO LEE.

The sea of apiarian journalism of late has been quite turbulent—what the "old salt" would call "lumpy." The Modern Farmer and Busy Bee captain, however, has been holding high carnival upon the crest of the waves and sailing into everything in sight; but it appears that the November Bee-Keeper sailed so close to windward that Captain Abbott couldn't "hold his luff," and completely lost steerage-way. He is now taking a reef and will probably drift ashore, where he may find something more substantial than wind to propel his craft hereafter.

The Bee-Keeper hardly hoped to "blanket his sheet" so effectually the first run, but if the job stays accomplished there will be cause for a general thanksgiving in bee-keeping circles next November. (H.)

DISILLUSIONMENT.

Facts Versus Fiction About Bees.

The myths and fables about bees, the heritage of our forefathers cling to us with strange pertinacity. For so long have the bees been used as examples of industry and other virtues, for so long have they been called upon to point a moral, that their supposed virtues have become to us as facts, and as we look at them we see only what we have been told, be it false or real.

The "busy bee" is a misnomer. Uneasy, yes. Busy, no. But little of her short life is spent in productive industry. Oft but three or four trips for honey or pollen constitutes her total daily toil without the hive, while within the hive she lies in any convenient cell, preferably on empty one or one containing an egg. Once ensconced in such a bed she remains utterly inert, scarcely breathing and oblivious to all scrambling over so much of her as protrudes from the cell, and for hours at a time she so sleeps. Even the work of ripening nectar must be classed as recreation not as labor, for it is but the pleasures of the gourmet which lead her to gorge herself with sweets fresh garnered from the flowers and once gorged she turns the sweet drink over her palate until converted by the operation it ceases to please and satiated she deposits her load and sleeps.

Even the careful packing of pollen is but her desire for a sweet pastry. As soon as the fresh pellets are dropped in a cell some hungry miss comes along and attempting to take a bite pushes it back into the cell. As it gets pushed back the pushing is harder in order to get a bite. It is amusing to watch her as she "roots" it along, just like a little pig, and now and then getting a nibble and seemingly smacking her lips over the morsel.

Comb building? Well, that does seem like work, but as wax secreting appears to be a more or less painful or uncomfortable operation, who can tell but that the fashioning of the scales into comb may afford a relief to her overwrought nerves. Or mayhap she, like some of her human sisters enjoys a little chewing gum. Who knows?

"The bee is not lazy, your statements are erroneous," do I hear you say? Just go to the bee and see for yourself. Spend hours at a time at it, all night if you wish, and if you go willing to learn you will be convinced of the truth of what I have told you. (M.)

EXPERIENCE, THE TEACHER.

Allen Latham wrote regarding the condition of his bees on November 15th: "I think I never had my bees in better all-round condition than they are this fall. I have gone the rounds of my hives three times seeking queens which were not up to the mark. Never saw so much pollen at this season before. Big lumpy loads of yellow pollen, possibly from witch hazel.

Drones began to fly early today. There are still two or three colonies which still retain their drones. I shall be interested to see whether they are alive in the spring. I once saw drones fly in February, but they disappeared shortly after that. In that case the colony was queenless while in the cases I have now, some are drones that I saved over.

While near one of my "baby" colonies which I was feeding I suddenly heard a different note, and watching, soon saw their queen playing about. Now this queen was properly fertilized as far as I know and in appearance she resembled a laying queen."

From the foregoing quotations the inexperienced bee-keeper will note that unusual conditions do not worry the veteran, but only arouse his interest, also that a skilled veteran can and does handle his bees late in the season when it would be quite unsafe for the novice to meddle. The expert knows the laws of bee life which he must obey. We hope to present these laws so clearly that the novice also may do as the expert does. (M.)

THE RECENT NATIONAL ELECTION.

Dear Sir: We, the undersigned, have counted the votes cast for officers for the National Association for 1907, and the results are as follows:

Whole number of votes cast for President, 752, of which L. A. Aspinwall received 403, M. A. Gill 340, and scattering 9 votes.

Whole number of votes cast for Vice-President 797, of which Geo. E. Hilton received 315, E. W. Alexander 299, W. H. Laws 179, and scattering 4 votes.

Whole number of votes cast for retary 801, of which Jas. A. Green receives 436, George W York 306, W. Z. Hutchinson 56, and scattering 3 votes.

Whole number of votes cast for General Manager 807, all of them being cast for N. E. France.

Whole number of votes cast for Directors 2283, of which G. M. Doolittle receives 620, Jas. A Stone 515,

NATIONAL BEE-KEEPERS

NATIONAL BEE-KEEPERS' ASSOCIATION CONVENTION, SAN ANTONIO, TEXAS, NOVEMBER, 1906.

R. A. Holekamp 442, Wm. Russell 303, J. J. Cosby 243, E. E. Pressler 154, and scattering 6 votes.

W. Z. Hutchinson, Secretary.
Leonard S. Griggs, Member.

Mr. N. E. France, General Manager,
National Bee-Keepers, Association.

Dear Sir: As the result of the ballot for officers of the National Bee-Keepers' Association, as given above, I declare the following persons elected to serve for the year 1907, to-wit: L. A. Aspinwall as President, Geo. E. Hilton as Vice-President, Jas. A. Green as Secretary, N. E. France as General Manager, and G. M. Doolittle, Jas. A. Stone and R. A. Holekamp as Directors for the ensuing term.

R. L. Taylor,
Chairman of Directors.

Discussing bee journals, a California subscriber writes: "But of them all I have from the first regarded the American Bee-Keeper considered from every standpoint, as far and away ahead. 'Long may you wave.'" (H.)

OUR COZY CORNER

BY HARRY E. HILL

This department of The Bee-Keeper is established with a view to affording a place for "private talks" between the editor and those friends who are taking an active interest in its advancement.

Beginning with this number, each photograph reproduced in The Bee-Keeper will be numbered, and the photographer's name will be given. Pictures of special merit will be "noticed" in this department, and their noteworthy points indicated here.

Suggestions from our readers, as to how The Bee-Keeper may be made more interesting, are invited. All the other pages will continue to discuss exclusively practical and scientific apiculture, but this page shall be reserved for the discussion of the journal itself—its illustrations and those who contribute to its interesting features.

Picture No. 1, in this issue, by Mrs. Johnson, of East Woodstock, Conn., is reproduced from a postal card, semi-matte surface, of the developing variety. It shows good judgment in the selection of position of light, which was rather too strong for a true rendering of values, but gives a contrasty result well suited to the requirements for reproduction. We have several other examples of Mrs. Johnson's photographic skill, which will appear in future numbers.

Fred W. Muth, 51 Walnut St., Cincinnati, Ohio, is becoming very expert in the use of the camera, and we already have a number of his pictures ready for use. Mr. Muth will show some pretty illustrations in The Bee-Keeper during the year.

E. F. Atwater, Meridian, Idaho, has just possessed himself of a camera, and through it he will probably reflect upon our pages some of those large western apiaries of his.

Pictures No. 4 and 5, are from 4x5 prints on developing paper, and are examples of very well-timed exposures, though printed a trifle too deep to give true values. Pearl C. Richardson will be a welcome member to our Club.

Jno. H. Rising, Lestershire, N. Y., writes: "It seems that we ought to be able to stir up a Bee-Keepers' Camera Club, for thus we could learn much and in a way become acquainted with one another. It is much easier to make things very plain by the use of illustrations and the camera affords an excellent means of getting accurate illustrations."

Let us hear from all the camera users who are "in on" the club.

AN ASTONISHING STORY.

Once upon a time (I always like to see a story start that way) there was a man, who, by the way, is living yet ("that's the worst of it"). The poor fellow, too, was addicted to the milk-drinking habit. This may have been a result of "trifling" with it when he was very young and thereby acquiring a "taste" for it, and should serve as a warning to others.

However, the gentleman in question had but recently moved into the neighborhood that is to be distinguished as the scene of this astonishing tale, and hearing the bell of the approaching dairyman on the street, rushed out, and, hailing him, inquired as to the price of a specified quantity of milk per week.

"Thirty-five cents, sir."

"All right, just leave it at the house," said the gentleman, and like a real man, dug up the required "thirty-five."

The reader's attention is invited specifically to this point, for now we enter the mysterious part of the story. The chief mystery is involved in the fact that the gentleman did not attempt to "stand off" the dairyman for the week's supply—but he didn't. That is, he did not even suggest the extension of credit to the extent of 35 cents.

Well, the milkman was delighted to have found another customer. He contemplated with delight the possibility of being soon able to add another pint of slop to the daily ration of his cow, which he well knew would result in improving the quality and increasing the quantity of his product.

And so, with solar regularity, the dairyman left the bottle of milk upon the doorstep of his new patron, for one, two, three weeks. Then he began to wonder why his esteemed patron did not say something about the cash end of the deal. He needed the money to buy slop for the cow, and he felt that some equivilent ought to be forthcoming for the supply of lacteal fluid upon which the gentleman had been wont to regale himself at breakfast so very long; but he hesitated to harass his patron, and time drifted on. It has a habit of doing that, you know.

Finally he decided to inquire, very respectfully, if it would be convenient for the gentleman to make a payment on the account.

"Why, I only ordered you to leave the milk for one week," said the irritable patron, "I only paid you for one week."

"But, my dear sir," protested the dairyman, "why did you not tell me if you did not want it?' You've been using it right along, haven't you?"

"Yes, but I didn't order it. I thought you were giving it to me."

Then the gentleman (?) refused to accept the milk any longer, and the milkman, "poor dog, got none" of the acount that he had permitted to accumulate through a wish to be obliging.

It will be noted that the gentleman thought the milkman was giving him the milk. What do you think of that? I think he must have fallen out of a cherry tree when he was little and injured his head.

Well sir, we looked the matter up, and found that this gentleman was a brother of the fellow who has "refused" to accept The Bee-Keeper at his postoffice after having received it for over a year beyond the time for which his subscription was paid, because he had paid but one year when he subscribed, and supposed that we were giving it to him for love, or something else. They were brothers all right.

The publishers of The Bee-Keeper do not want to send the paper a single day to anyone who does not want it, nor to any who are unwilling to pay the subscription price; but there are a few who we should like to have pay up arrearages and take a fresh start. We want, and intend to supply the best bee journal in the country for fifty cents a year, and we want to supply it on a business basis. It's no love proposition. There are no Carnegies connected with the enterprise. We do not want to bore anybody, nor to cause them "astonishment," as Shugio would say. But "that reminds me."

Shugio, an ambitious young Japanese salesman employed by an importer of Oriental goods had asked so often for a chance to do clerical work in the office that last week he was told he might write letters to three persons in the firm's books to ask them if they would make some payment on their accounts.

"Go easy with them," cautioned the importer. "They're all good customers, but just a bit slow."

Two days later the importer was surprised to receive checks in full for all three accounts. One check from a well-known woman was accompanied by a sharp note, and the head of the firm hastened to find the copy of Shugio's dunning letter. It read:

"Dear Mrs. ——: If you do not do us the extreme honor of paying all the dollars and all the cents of this accounting which so long you have owed to our business of importing, we shall to our regret begin to do something that will cause you the utmost astonishment."

The Bee-Keeper does not wish to do that. It don't want to "astonish" anybody, nor to inconvenience anyone; but it does want and expect the subscription price from every subscriber, and especially appreciates the promptness with which many hundreds of its patrons renew their subscriptions.

The man who will subscribe for a periodical and after receiving it for one or two years in excess of the time paid for, and then, without having previously served notice of his wish that it be discontinued at the expiration of his term, is mean enough for anything —he'd steal acorns from a blind pig.

That's all.

A BEE-KEEPERS' CAMERA CLUB.

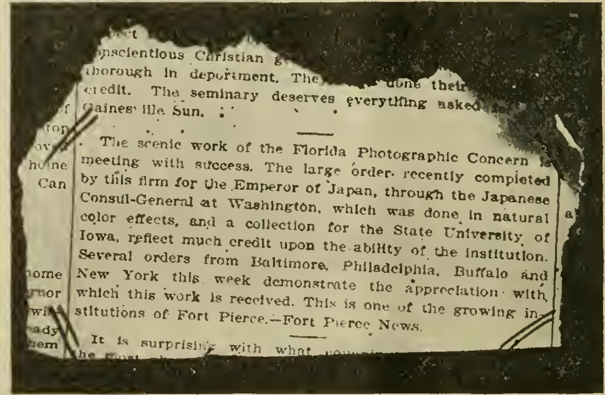
We have decided irrevocably upon one thing. The American Bee-Keeper must have more and better photographs with which to illustrate its pages. We want pictures of good subjects, well taken—pictures that illustrate, teach something, tell a story, edify or otherwise interest all who are engaged in bee-keeping.

The era of pictures has dawned and we are now living in an age of illustrated journalism. The pages of the modern magazine and trade journal fairly sparkle with their profusion of beautiful photographic reproductions. There is no good reason why a bee journal should not be as profusely and artistically illustrated as any other trade periodical, and the American Bee-Keeper is about to undertake the introduction of this most interesting feature in the realm of apiarian journalism.

No doubt, one reason why there are

so few camera users among the bee-keepers is that they recognize the necessity for either a lot of experience or a lot of expense, when it comes to finishing the work. Assuming that such is the case, we have decided upon a plan that will relieve the objection entirely. It is this:

During the current year, at least, we will develop all plates or films and finish one print from each, free of charge, for our subscribers. The exposures must have been made upon apiarian subjects, or must represent things of interest to bee-keepers, however. We do this in order that we may have access to a greater collection of subjects from which selections may be made for publication in the American Bee-Keeper.



nscientious Christian g

thorough in deportment. The done their

credit. The seminary deserves everything asked

Gainesville Sun.

The scenic work of the Florida Photographic Concern is meeting with success. The large order recently completed by this firm for the Emperor of Japan, through the Japanese Consul-General at Washington, which was done in natural color effects, and a collection for the State University of Iowa, reflect much credit upon the ability of the institution. Several orders from Baltimore, Philadelphia, Buffalo and New York this week demonstrate the appreciation with which this work is received. This is one of the growing institutions of Fort Pierce.—Fort Pierce News.

It is surprising with what

AT THE SERVICE OF OUR SUBSCRIBERS.

We have one of the best equipped photoghaphic establishments in Florida, and our subscribers who entrust their finishing to us may rest assured of skillful service by experienced men. Some may wonder how it happens that The Bee-Keeper is so well equipped for photographic work. In order that all may have confidence in our ability, we beg to state that we finish thousands of pictures each year for amateur photographers all over the State. The accompanying clipping from a local newspaper will serve to convey an idea as to the class and scope of our work. The "Florida Photoghaphic Concern" is simply a firm name adopted for his photographic business by your editor, who is also the official photographer of the Key West extension of the Florida East Coast railway, an engineering feat involving the expense of twenty million dollars, and by which the city of Key West is being linked to the main land by rail, and many miles of the ocean waves will be spanned by concrete bridges. We are making thousands of photographs of this great enterprise, and our contract with the railway company covers a period of several years. Expert skill and the best equipment are necessary to handle such work, and Bee-Keeper subscribers will find our establishment at their service, as stated.

Photography is a delightful, as well as a profitable avocation to those who become skillful, and we should like to see more bee-keepers equipped to record by photography the numerous interesting things that they encounter. We should like to see the "Bee-Keepers' Camera Club" a well established and enthusiastic reality. Here's an idea.

Let every Bee-Keeper subscriber who uses a camera write us, stating size and kind of instrument, and requesting to have his (or her) name enrolled as a member of the "Bee-Keepers' Camera Club.' This will be an informal affair whose members contribute photos for illustrating the American Bee-Keeper. For the information of others, the name and address of each will, if desired, be published in The Bee-Keeper, so that correspondence for the improvement of the work may be carried on between members.

We will maintain a sort of information bureau here, and all members shall be at liberty to submit for criticism examples of their work, or to ask any photographic questions.

There are already quite a number of experienced photographers among the bee-keepers, and these we hope to interest in keeping an eye out for good pictures for The Bee-Keeper, as well as to see many more become proficient in the use of the camera.

We hope to be favored with correspondence from all interested, and to secure the co-operation of very many of our readers in this effort to secure good and interesting material for publication.

Send along your exposures for development and finishing. We will take care of them for you, free.

KRUXO

The perfect developing paper for professional and amateur photographers.

Easiest to Use, Best in Results. Low in Price.

It's Easy to Make Pictures with **KRUXO.**

Write today for full information, to

KILBORN PHOTO PAPER CO.,
CEDAR RAPIDS, IOWA.

N. B.—The editor of The Bee-Keeper has used more than a thousand gross of Kruxo paper.

Our Special Premium Offer

We have been successful in closing a contract with the Selden Pen Mfg. Co., of New York, whereby for a limited time we can supply a guaranteed

$2.00 Gold Fountain Pen,

"DIAMOND POINT."

and the American Bee-Keeper one year for only 90c to every subscriber, old or new. The pen will be forwarded immediately upon receipt of the money. It is made of the best quality of hard rubber in four parts, and fitted with a guaranteed irridium pointed 14-k **GOLD PEN.** The "fountain" is throughout of the simplest construction and can not get out of order, overflow, or fail to supply ink to the nib.

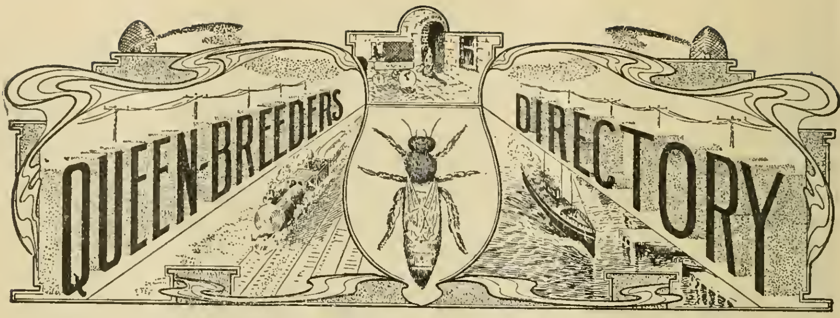
"A FOUNTAIN PEN IS A NECESSITY OF THE 20TH CENTURY."

It dispenses with the inconvenient inkstand and is always ready for use.

"THE DIAMOND POINT" bears the manufacturer's guarantee that the pen is solid **GOLD, 14-k fine.** If it does not prove satisfactory in every way we will exchange it for another, or return the fifty cents additional upon return of the pen.

This is an unusual opportunity to secure, at a very low price, an article of superior quality that is coming to be essential to the comfort and convenience of every one. Remember this offer is for a short time only.

The American Bee=Keeper, Falconer, New York



ONE-HALF INCH SPACE ONE YEAR ON THIS PAGE, $3.00

THE FRED W. MUTH CO., 51 Walnut St., Cincinnati, Ohio. Standard Bred Red Clover Three-banded Queens, Golden Italians and Carniolans. Safe arrival guarantee. Send for circulars.

QUEENS HERE.—We are still asking you to give us your trade. We sell Italians, Goldens and Carniolans at 75c for untested and $1.00 for tested. Price on quantities and nuclei upon application. JOHN W. PHARR, BERCLAIR, TEXAS Jan. 6

SWARTHMORE APIARIES, SWARTHMORE, PA.—Our bees and queens are the brightest Italians procurable. Satisfaction guaranteed. We are breeding the Caucasians absolutely pure from direct imported stock.

W. W. CARY & SON, LYONSVILLE, MASS.—Breeders of choice Italian bees and queens. Imported Leather and Root's Red Clover strains. Catalogue and price list FREE.

MOORE'S LONG-TONGUED STRAIN of Italians become more and more popular each year. Those who have tested them know why. Descriptive circular free to all. Write J. P. Moore, L. Box 1, Morgan, KY.

BETTER THAN AN ISLAND—No other bees within five miles. All fast trains stop here. I consider the Banat Caucasian bees the best and gentlest in the World. One colony made 32 fancy sections of comb honey during September, seventy Italian colonies did not make a pound. Banat Caucasians bred here, other races in out yards. Banat Caucasian queen $3.00. Caucasian queen $1.50. Golden Italian 75 cts. Order now D. Collins, Ph. D., Emporium, Pa.

THE A. I. ROOT CO., Medina, O.—Breeders of Italian bees and queens.

QUALITY QUEENS are the best Italians yet. Send for circular. H. H. JEPSON, 182 Friend street, Boston, Mass.

BREEDING FROM SELECTION MERELY rejects the poorest. Long harvests, high mountains and deep blossoms improves the best. For queens bred along this line address for particulars, C. W. DAYTON, Chatsworth, Calif.

W. J. DAVIS, 1st YOUNGSVILLE, PA. breeder of choice Italian Bees and Queens. Quality, not quantity, is my motto.

D. J. BLOCHER, PEARL CITY, ILL—Caucasian and Italian Queens reared in separate yards. Safe arrival of all stock guaranteed. Circulars and price list free. Jan 7

COLLINGDALE APIARY—J. R. Rambo, breeder of Caucasian and Golden Italian queens, Italians bred from stock received from Swarthmore. Caucasians bred from imported queen. Queens reared and mated in separate yards, 6 miles apart. Satisfaction and safe arrival guaranteed. Agent for The W. T. Falconer Mfg. Co's. bee supplies. Collingdale, Delaware County, Penn.

JOHN M. DAVIS, SPRING HILL, TENN.—Has greatly enlarged and improved his queen-rearing facilities. Two unrelated Carniolans and a dark leather Italian lately imported. My own strains of three-band and golden; "Moore's" long-tongue; Doolittle's golden; all selects. Carniolans mated to Italian drones when desired, No disease. Circular free.

WE are now booking orders for Providence Queens for spring delivery. Cull & Williams, Providence, R. I.

HOOPER BROS.' Italian Queens reared in the West Indies are the most prolific and give the best results available any time of the year. Write at once for information to Kingston. Jamaca, B. W. I., Box 162 Nov 6

HONEY DEALERS.

WE are always in the market for extracted honey, as we sell unlimited quantities. Send us a sample and your best price delivered here. The Fred W. Muth Co., 51 Walnut St., Cincinnati, O. 5-5

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10 SOUVENIR POST CARDS.

Stunners, Comic, Korkers, no 2 alike, and our big magazine 1 year, 10c.

AMERICAN STORIES, Dept. H. D., Grand Rapids, Mich.

Are you making your bees pay? If not, why not? Can you tell? Better find out. (M.)

HONEY AND BEESWAX MARKETS.
(Dealers' Selling Prices.)

Albany, N. Y., October 29.—Clover (fancy) 15 to 16; No. 2, 14 to 15. Mixed, 12 to 13; Buckwheat, 12; Extracted, white 7 1-2, mixed 7 to 7 1-2, buckwheat and dark 6 1-2. Advise shipping honey by freight only.
H. R. Wright.

Chicago, Dec. 17.—There is the usual dullness in the honey trade at this date owing to most of the retailers having stocked up sufficiently to carry them over the holidays; but the stock in the hands of the trade generally is below the normal; hence prices are firm at 15 to 16 cts. for No. 1 to fancy white comb with off grades at 1 to 2 cts. less, amber grades dull at 10 to 12 cts. Extracted white firm at 8 cts. for clover and basswood; ambers 6 1-2 to 7 1-2 cts. per pound. Beeswax 30 cts. per pound. R. A. Burnett & Co.

Cincinnati, Dec. 7.—The honey market is in a healthy condition, particularly extracted honey, the demand being better than one year ago. This is probably due to the excitement among those holders who are trying to inflate prices. Quote amber extracted honey in barrels at 6 cts. to 7 cts., according to quality. Fancy table honey in barrels and 60 pound cans, at 8 cts. to 9 cts. The demand for comb honey has decreased somewhat, owing to the season of the year when the sale of that article suffers. Offer fancy white comb honey in a wholesale way at 15 cts. to 16 cts. For choice, yellow beeswax, we are paying 30 cts. per pound delivered here.
The Fred W. Muth Co.

Denver, Dec. 18.—The supply of honey is light all over the State. The demand is good. We quote our market today as follows: Comb, $3 per case of 24 Sec. Extracted, white, 6 cts.: Light amber, 5 cts. Beeswax, 28 cts. The Frisbee Honey Co.

Kansas City, Mo., Nov. 7.—The supply of honey is light, with good demand. We quote our market today as follows: Comb, $3.00 to $3.25 per case of 24 sections; Extracted, 6 cents to 7 cents. Beeswax, 25 cents. C. C. Clemons & Co.

New York. Nov. 11.—Comb honey: There is a good demand, principally for fancy stock of both white and buckwheat honey. Mixed and off grades are more or less neglected. Receipts have been quite heavy of late, but there is no over-stock whatsoever, as the demand has been good right along. We quote fancy white at 15 cents; No. 1 at 13 to 14 cents; No. 2 at 12 cents; buckwheat and mixed at 10 to 11 cents per pound. Extracted honey: Demand good, especially for fancy grades. Prices are ruling higher. We quote California white sage at 7 1-3 cents to 8 cents, light amber at 7 to 7 1-2 cents, amber at 6 1-2 to 7 cents per pound; lower grades, in bbls. at 55 to 65 cents per gallon, according to quality. Beeswax quoted at 29 to 30 cents per pound. Hildreth & Segelken.

Toronto, Canada, Dec. 15.—The market today is ranging from 11 to 12 cts. for No. 1 Clover honey, Buckwheat honey and the darker grades selling from 6 to 7 cts. White & Co., LTD.

Worcester, Mass., Dec. 14.—The supply of honey is moderate while the demand is good. We quote our market today as follow: Comb, 14 to 16 cts.. Honey is selling very well. Think market will clean up in good shape.
W. H. Blodget Co.

Cent-a-Word Column.

DO NOT burn your refuse from Wax Extractor. Send it to me and get your cash. Archie L. Coggshall, Groton, N. Y. tf

WANTED:—Address of maker of white poplar sections. L. O. QUIGLEY, Goshen, New York.

AGENTS WANTED—To sell advertising novelties, good commission allowed. Send for catalogue and terms. American Manufacturing Concern, Falconer, N. Y.

FOR SALE—45 colonies of bees, excellent strain, no disease, several hundred hives, foundation mill, dipping tank, Cowan honey extractor and numerous other appliances. Located in Florida. Cheap for cash. Address, S. B. C. Care American Bee-Keeper, Fort Pierce, Fla.

INCREASE is a hadsome little book telling how to form new colonies without breaking working stocks. A simple, sure, satisfactory plan, 25c. Baby Nuclei tells how to mate many queens from sections with a mere handful of bees; 42 pages, 20 pictures, 50c. Cell Getting tells how to save labor in rearing queens, 50 cents. Queen rearing outfits. Golden all-over and Caucasian Queens. Circulars free. E. L. PRATT, Swarthmore, Pa.

WANTED:—by Chicago wholesale and mail order house, assistant manager (man or woman) for this county and adjoining territory. Salary $20 and expenses paid weekly; expense money advanced. Work pleasant; position permanent. No investment or experience required. Spare time valuable. Write at once for full particulars, and enclose selfaddressed envelope. Address.
GENERAL MANAGER, 143 E. Lake St., Chicago.

IF, IF, IF,

BINGHAM

HAS MADE ALL THE IMPROVEMENTS IN

Bee Smokers and Honey Knives

made in the last twenty years, undoubtedly he has made THE BEST ON EARTH

Smoke Engine, 4 inch stove, none too large, sent postpaid	$1.50
2 1-2-inch	.90
3 1-2-inch	1.10
2-inch	.70
3-inch	1.00
Little Wonder, 2-inch	.65
Knife	.80

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For 1907 the publishers of the Cosmopolitan announce contributions from such famous authors as G. Bernard Shaw, Jack London, W. W. Jacobs, Edwin Markham, Joseph Conrad, H. G. Wells, Anthony Hope, Alfred Henry Lewis, Booth Tarkington, David Graham Phillips, Ella Wheeler Wilcox, etc.

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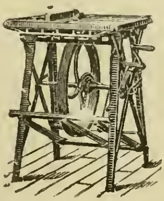

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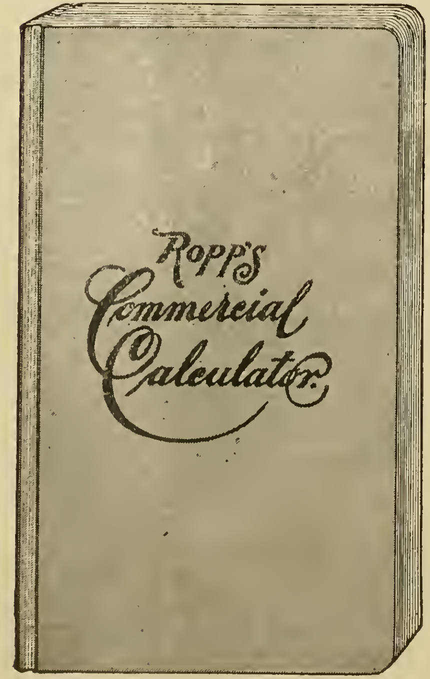

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THE AMERICAN BEE-KEEPER

FEBRUARY 1907

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It Stands on its **Own Name** and its **Own Foundation**, to which alone it owes its Reputation and Merits.

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Cosmopolitan per year,	$1.00	**OUR PRICE $1.10**
AMERICAN BEE-KEEPER per year,	.50	
Total per year,	$1.50	

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Thousands of Shipping-Cases and Millions of Sections now ready for you in the warehouses of ourselves and our agents as given below.

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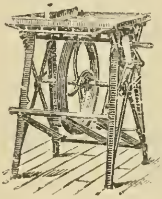

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FREE !

A 25-word adv. one time free, and our large 15-page, 64-col. Illustrated Magazine one year 25c. This-for That exchange column only 1-cent a word. Sample magazine and particulars for stamp.

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Three Months for Only 20 Cents

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It is the only Weekly Bee Paper in America. Those who write for it are among the most extensive and successful bee-keepers in the World. Many of them produce honey by the ton, and make money at the business, hence their experience is valuable.

Among the Departments represented in the Bee Journal are these: Editorial Notes and Comments, Miscellaneous News Items, Contributed Special Articles, Opinions of Some Experts, Proceedings of Conventions, Our Bee-Keeping Sisters, Mr. Hasty's After-thoughts, Dr. Miller's Answers to Questions, Honey and beeswax Market Quotations.

Every Bee-Keeper, whether having one colony or 100, should read the old American Bee Journal every week.

Only $1.00 a Year; or 20 cents for a trial trip of three months (13 copies), to a new subscriber. Sample copy free. Ask for it.

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3 and 5 Banded Italian and Carniolan Queens

Say, friends, you who have supported us during the past season, we desire to express our thanks for your patronage in the past, and respectfully solicit a continuance of your valuable favors through the season of 1906.

Our queens now stand upon their merits and former record. We are preparing for next season, and seeking the patronage of large apiarists and dealers. We do not claim that our queens are superior to all others, but that they are as good as the best. We will furnish from one to a thousand at the following prices: Tested, of either race, $1; one untested, 75c; 5 for $3.25; 10 for $6; 15 for $8.25; 25 for $12.50; 50 for $23.50; 100 for $45. For descriptive circulars address,

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SUPPLIES

Headquarters for the Best

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After a man succeeds in publishing a good journal, the next step is that of getting it into the hands of the people, of getting them to reading it, and becoming acquainted with its merits. This can be done by advertising, sending out sample copies, circulars, etc. All this costs money. I think I am safe in saying that, for every new subscriber I have received, I have paid $2.00 in advertising; hence, I have always said that a publisher of a good journal could afford to send his paper one year free for the sake of getting it into new hands. It would cost no more than other forms of advertising, and would be more effective; but, for obvious reasons, this plan could not be put into practice; but I am going to come as near to it as I can. I have between 200 and 300 complete sets of back numbers for the present year; and as long as the supply holds out I will send a complete set, and the rest of this year free, to any one who will send me $1.00 for the Review for 1907.

Back numbers of the Review are different from those of newspapers and some journals. The information that they contain is just as valuable now as when first published. In an advertisement like this it is imposisble to give much description, but I will mention one or two features of each issue of

THE REVIEW FOR 1906

JANUARY.—The keynote of the Review for 1906 is "The Control of Increase;" and Mr. Gill, of Colorado, starts off by telling how he completely and profitably controls the increase of 1000 colonies run for comb honey.

FEBRUARY.—R. C. Aikin shows how, with a knowledge of principles, increase can be controlled; but perhaps the most valuable contribution to this issue is from R. F. Holterman, of Canada, describing "Some Short Cuts in the Production of Extracted Honey.

MARCH.—In this issue is illustrated and described the only really successful non-swarming hive that has yet been invented. Its inventor, Mr. L. A. Aspinwall, secured an average of 140 pounds of comb honey the past season from fifty colonies, and had no swarms.

APRIL.—The most valuable article in this issue is from C. A. Olmstead, of New York, in which he illustrates and describes a method of foretelling swarming without opening the hive.

MAY.—In this issue is begun a series of the most delightfully and beautifully illustrated sketches that have ever appeared in the Review—that of the editor's experience in locating and managing three out-apiaries in the wild, picturesque, raspberry region of Northern Michigan.

JUNE.—The article this month on "Control of Increase," is by that veteran, J. E. Crane, of Vermont, and shows how to do the work when the harvest comes early. This issue also gives the editor's experience in moving his 400 colonies into Northern Michigan—illustrated with four engravings.

JULY.—This issue has a beautiful full-page illustration of the Review apiary here at Flint (105 colonies), and the editor gives a resume of his work in this apiary for the first six months of the year—showing where he failed and why he succeeded.

AUGUST.—In this number the editor tells of "Reaping the Harvest in Northern Michigan," and gives pictures of the different apiaries, some at old abandoned lumber-camps, one with a tent for a honey-house, while the reading-matter has an actual flavor of the wild northern woods.

SEPTEMBER.—Of all the articles in this year's Review I doubt if any one is more really helpful than the one in this issue by the editor, entitled "Conveniences in the production of Extracted Honey." It has several illustrations, and shows how to use bee-escapes without the back-aching work of lifting the hives by hand; how to make a honey-knife cut as "slick as a razor;" how to make an uncapping-can for ten cents; how to arrange a cheap automatic strainer, and run the honey directly into the cans; and how to arrange an electric bell, at a cost of 60 cts., that will ring when the can is full.

Instead of mentioning some of the special features for October, November, and December, let me use the space to say that one of the good things that will appear in the Review for 1907 will be a series of articles from E. D. Townsend, Michigan's foremost bee-keeper. All of his writings in the past have been fragmentary, a glimpse here and there, and they have been scattered here and there in different journals. Now he is going to write in a consecutive manner, starting at the beginning of the season and going through the year—just as though he were writing a book. It will give his system of management.

ADVANCED BEE CULTURE

This is a book of 230 pages, beautifully printed, bound, and illustrated, that discusses bee-keeping from a money point of view—shows how to make a pleasant and profitable business out of bee-keeping. Price $1.20; or, the REVIEW for 1907 (and all the back numcers of this year free) for only $2.00.

W. Z. HUTCHINSON, Flint, Mich.

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We handle the finest bee supplies, made by the W. T. FALCONER MFG. CO., Jamestown, N. Y. Big Discounts on early orders, let us figure with you on your wants.

MUTH SPECIAL DOVE TAIL HIVES, have a honey board, warp-proof cover, and bottom board, think of it, same price as the regular styles. Send for Catalog.

THE FRED. W. MUTH CO.,

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NOTE THE ADDRESS

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Being the cleanest, is usually worked the quickest of any foundation made. The talk about wiring frames seems absurd. We furnish a Wired Foundation that is BETTER, CHEAPER and not half the trouble to use that it is to wire brood frames.

Circulars and samples free.

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NOT IN THE TRUST OR UNION

Best 8 frame 1 1-2 story Dovetail Hives	$1.25
Best 10 frame 1 1-2 story Dovetail Hives	1.40
Sections—No. 1 Beeway	3.75
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Special prices to small dealers. Large warehouse, big stock, only best goods handled. Send for 32 page catalog free.

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The Miller WAX EXTRACTOR

Has revolutionized wax-handling methods. Get acquainted with the MILLER before buying.

THE AMERICAN BEE-KEEPER

Entered at the Postoffice, Fort Pierce, Fla., as second-class mail matter.

Vol. XVII. FEBRUARY, 1907. No. 2.

FOR LOWER FREIGHT RATES.

Inadequate Packages and Bee-Keepers' Carelessness Held Responsible for Present Extortion.

FRED W. MUTH.

AT THE annual convention of the National Bee-Keepers' Association, held at San Antonio, Texas, in November, there was a committee appointed to secure, if possible, lower freight rates on honey. Being one of the committee in question, I wish to make an explanation in behalf of the recognized high freight rates, and then point out to each and every bee-keeper the steps that must be taken in order that the committee appointed may be successful.

We are dealers in both comb and extracted honey, and in the course of a year receive many car-loads as well as innumerable small shipments. In one year's time we are obliged to enter many, many claims with the railroad companies, and are subjected to experiences which enable me to write intelligently upon this subject.

Am informed by a railroad official that the classification committee determine their classifications on an average, based upon the number of claims and the amount of money expended for damages incurred enroute in the course of one year. Therefore, it may plainly be seen that the shippers are responsible for the exorbitant freight charges imposed upon them, and lower rates need not be expected until the losses paid by the transportation companies have reached the very minimum. Consequently, we must help ourselves, by learning how to ship our honey. Other industries have done it; why not we? Take, for example, the packages used by the sugar refineries; they are perfect, as well as are those of the coffee importers, cereal manufacturers, and countless others that I could mention. They were compelled to work, and work hard in order to bring their losses down to the minimum, and soon discovered that it was absolutely necessary to use perfect packages and nothing else. They now have the advantage of lower freight rates than the honey shipper.

In order to accomplish our aim to secure lower rates, we must, without one exception, ship both comb and extracted honey in first-class packages. Brother bee-keeper, if you are raising comb honey for the market, by all means use bottom as well as top starters in your sections, so that the honey can not break loose at the bottom. This is the first and a very important step to be taken. Furthermore, be sure to use the no-drip shipping case. Wrap each case in paper, so that it will be kept clean enroute. Pack six or eight cases into one carrier well supplied with straw in the bottom and having handles that will extend from four to six inches beyond the sides of same. Lastly, do not forget the usual "Handle With Care" placard.

Now, if every bee-keeper and shipper of honey will follow the above instructions to the letter, it will tend to introduce a method that is both simple and practical. He will not only realize a greater profit from his product, but will also be assisting those who are giving their time and lending their experience to secure lower freight rates for you.

The producers and shippers of carloads of comb honey appreciate the value and advantage in using bottom as well as top starters. For instance last summer we received two carloads of comb honey, from two different shippers. The one car contained 1170 and the other 1350 cases, and in the entire lot, there was not one comb broken. These shippers understand their business. On the other hand, we received quite a number of small shipments, with here and there a broken comb, frequently some badly damaged lots, caused by the failure to use bottom starters. These experiences are trying and disgusting, and were the shipper in question subjected to a few of them, he would, without a doubt, pay more attention to the manner in which he raises his honey and his mode of packing for shipment. These are the shipments that are responsible for the high rates. Do not misunderstand me; there are many producers and shippers of honey on a small scale, who thoroughly understand this part of the work, and we must give the credit that is due them.

A word regarding extracted honey; the railroad companies pay more damage claims on account of poor packages used for extracted honey than for comb honey, and it behoves us to ship our extracted honey in new cans, if this style of package is to be used, or if it be barrels, let them be good ones, well coopered, and first-class in every respect.

The greatest trouble rests with the bee-keeper; he clings entirely too much to second-hand packages, just because he can buy them a little cheaper, whereas, if he were to ship his product in good packages, the freight rates would be comparatively less, and in the end, his cost for shipping would be a great deal less than at the present time, and there would be no trouble with the railroad companies, nor any unsatisfactory transactions.

Therefore, friends, we must ask you to help, each and every one, if you want us to obtain lower freight rates for you.

Cincinnati, Ohio.

LOCATING THE CAUSE.

Why the Different Yields in Different Colonies of Apparently Even Strength.

F. GREINER.

NO BEE-KEEPER of experience can have failed to observe, that the colonies of a yard do not all give the same result, even such as we think are of uniform strength.

I have many a time been disappointed to the utmost to find that the most promising swarms did so little when others of less strength accomplished much more. How can this be explained, and what remedy have we at our command to attain better and more uniform yields?

I account for the great difference in yields in this way:

Our judgment is unreliable to begin with. We may think we have two colonies precisely the same, when in reality there is a wide difference. It is not the number of bees only which is the decisive factor, but a great deal depends on the age of the bees and on the make-up of the colony, the proportionate number of young bees to that of old bees. In this respect there may be a great difference in different colonies which are numerically the same.

When the real honey season begins and a colony is composed of just the right proportion of young bees, we may see that colony make a record (speaking particularly of comb honey production). If the proportion of young bees is not right, the result will be poor. If our colony arrives at that desirable point just exactly the day when honey begins to flow, all is well; if a few days too soon there will be trouble, either swarming or loafing. Neither is conducive to gather a large crop of honey. It is far better that a colony should be a few days too late than too early. This has been my experience.

What can we do now to bring about uniform results? Have we any way of telling just when a colony is in this best condition? Further, do we know, when our colonies should arrive at this point? Some one has said—yes it is very often said—"study your location, know when to expect your harvest, know your honey producing flora, then you will know when to expect the honey-flow and you can manage your bees intelligently."

This advice would be very good if nature was not so full of freaks. In one of my outyards, for example, I usually get honey from clover about June 10 to 15, and it lasts till July 20 to 25. Last year I had given up all hopes of obtaining a crop when finally honey began to flow in July, or nearly a month later than common. If I had understood to get my bees into that best condition by June 10, they would, by July have been all out of condition. The fact is, we cannot depend on honey seasons. They vary. There is as much variety in them as there is in the bees themselves.

Our friend Doolittle might say: "Get my stock of bees, they breed up just at the right time." Others would say, "get our stock of long tongued bees, they will fill your hives with red clover honey," still others will make some other recommendations perhaps, none will do us much good, we have tried them. Still there is the same lack of uniformity of yields. The nearest we have come to overcoming this feature of bee-keeping is by systematically practicing the shaking system of making swarms.

Years ago, when that system was still in its infancy or experimental stage, we only treated our most obstinate colonies that way (and it always brought them to their senses), but each succeeding year more colonies were thus managed, till now we practice this method all the way through with profit.

It must, however, not be lost sight of that young queens are very essential to a good honey crop. Whether or not we ought to take a queen through or into the second winter, I would not want to say. It involves a great deal of labor to renew queens every year; but if it pays, then we better do so, and indeed I am getting into better shape each succeeding year to do this.

I am afraid that there always will be some difference between different colonies as to the amount of honey they store. It depends some on the way they survive the winter; for it must be said that we cannot as yet bring our bees through a winter with that degree of certainty and uniformity, that is possible with sheep, horses, cattle and domestic fowls. When we are able to winter our bees perfectly, when we can foretell when and what the honey season will be; when we know just in what condition the bees ought to be and are able to "get" them there, then I think with good queens, young queens, the yields will become more uniform. As matters stand now, it is not a very serious drawback that colonies do not come through the winter absolutely uniform, as to strength. We are apt thus to hit it with a part of them and it gives us a better opportunity to treat them as we wish. If we had to shake every colony on the same day, we would be in the same predicament as the man with a large peach orchard, all of one variety, some would have to "go to the dogs."

P. S.—Since writing the foregoing I have been at the Bee-Keepers' meeting of the New York State Association, and it seems that some of the prominent members do not exactly agree with all I have said in the above, and I will add here, as nearly as I can remember what struck me most forcibly.

Mr. Geo. B. Howe ably handled the subject of "breeding good bees." He does not seem to care for color or purity, but wants a thoroughbred stock that will reproduce itself. He holds that by careful breeding the honey bee can be greatly improved. Says he has bees that will reproduce themselves and that the uniformly large honey crops will show it. I hope to have the opportunity to test his bees in comparison with common haphazard-bred bees as to this.

I hope there is that great difference in bees as we find it in poultry. I have Langshan and Hamburg stock, for example and the Hamburgs produce many more eggs. In other words they produce the same number of eggs (not the same bulk however) at 1-2 the cost, and the profits are greater accordingly. If bees will do the same we ought to look after that matter, but so far I have not found that difference. I am inclined to believe, that with ten pounds of black bees picked up at any farm house, I can produce pretty nearly as much honey as with ten pounds of the advertised strains. I propose to make the test by shaking these bees into empty hives, in the same locality, during the same season, at the same time. The bees must come from populous colonies and have good queens, not failing queens. In order not to be too hard on the Italians I might give them one or two frames less in the brood chamber; and if I had Carniolans I might deem it best to enlarge their broodnest by one or two frames above what the Blacks have.

Mr. S. D. House made the claim at this meeting that he had stock, that would reproduce itself, and that he could pick out the daughters and grand daughters of a certain queen in his yard by the larger number of supers on their hives! I am glad of this. I envy any bee-keeper that has such a gold mine, and I hope these men will propagate their strains of bees and improve them, fix them, and by so doing bless all bee-keepers.

I would not want to discourage any one in attaining anything as worthy as this, or trying to. However it seems to me that the progress we can hope to make must of necessity be slow, and my experience in this matter is, that the difference in the yields we notice in colonies, is more often due to conditions than to the superior stock.

In shaking the bees off from their combs and forming a new colony, so to say, it does not matter so much whether the bees are proportioned properly as to age as when they are left with all their brood. It seems they adjust this matter among themselves.

I have often observed that young bees, 10 to 12 days old, make regular trips to the fields and gather honey and pollen. The rule is, they must be from 16 to 18 days old, and the age of a bee is largely governed by the number of days she has been in the field, not so much as what housework she may have done or not done. I know of no better way of testing different strains of bees than by the above method. The brood combs can be utilized for forming another colony of each. Give them a queen cell or queen of the same respective stock and compare the workings of these.

Naples, N. Y.

THE LATHAM-MILLER BEE VEIL.

A Recent Device that Combines Nearly all Desirable Features and Eliminates the Objectionable.

ARTHUR C. MILLER.

THE NEW form of bee veil illustrated herewith is Mr Allen Latham's modification of the one described by the writer in The Bee-Keeper of February 1906. For the benefit of our new subscribers the method of making is repeated here.

The wire cloth is cut in the shape shown and about two inches longer than the distance around your hat brim. The wire is about eight inches wide at the widest part and three inches at the narrowest. The straight edge should preferably be the selvedge of the cloth. To prevent ravelling and the projecting of sharp points of wire the other edges should be folded or "hemmed." To make a straight and neat bend clamp the edge between two boards and bend to a right angle when it may be removed, folded down with the fingers and pounded flat. Treat all the cut edges thus, folding a hem about one quarter of an inch wide. These edges should be bound by folding over them a piece of wide tape or a strip of cloth about a half-inch wide. Sew it on a sewing machine using a stiff needle, coarse thread and tight tension. It will not harm the machine but will blunt the needle.

AMERICAN BEE-KEEPER

THE VEIL ROLLED.

After the binding is on sew on in the same way the strip of cloth which serves as a skirt to the veil and is to tuck under the coat. Make it amply wide. To the upper edge of the wire is sewn a similar but narrower strip of cloth the outer edge of which has a hem in it through which passes a tape for gathering it about the hat crown. When the tape is in place just stitch it at the center and then while it will gather the cloth equally from each side it will not pull through —an occurence which is not agreeable when one is in a hurry.

AMERICAN BEE-KEEPER

THE VEIL OPEN.

The veil shown can be made into a small roll and carried readily in the pocket. To make ready for use it is unrolled, the two ends lapped an inch or more and fastened with a safety pin and the upper and lower cloth treated in the same way. It is then slipped over the hat the tape drawn and tied and it is ready for use.

If made from bronze-wire cloth it is more flexible than from painted cloth and will not rust or crack. The lustre on the bronze wire soon disappears or it may be hastened by washing the wire with vinegar or other weak acid.

In this veil Mr. Latham has given us all the advantages of the best designed wire veil combined with the convenience of a pocket veil.

Providence, R. I.

HOW MANY COLONIES SHALL WE WINTER.

ALLEN LATHAM.

THE GENERAL belief, I have been led to think, among bee-keepers is that one should winter a few more colonies than he intends to run the next season for surplus. There may be some lost in the winter and others so reduced in strength that they cannot be profitably got ready for the harvest; hence the notion that it is well to winter extra colonies.

I question the policy that is outlined above, and believe that local conditions should determine the number of colonies that should be wintered. The bee-keeper who has not solved the wintering problem to the extent that he can winter his bees as well as he can his cows has much yet to learn. I should then, for the practical apiarist, rule out the wintering of extra colonies for the simple purpose of making-good winter losses.

Probably in most localities one should winter the same number of colonies as he expects to run for surplus. I should judge such localities to be those where the main flow starts in about the middle of June.

coming at a time when normal colonies will be at their best. Probably most white clover localities would come under this head.

Far otherwise if the chief flow comes early or comes late. Let us consider briefly the conditions offered by the early and the late flows, and seek a method of meeting those conditions.

By an early flow I mean one coming within six or eight weeks from the time bees get their first natural pollen. For such a flow it is practically impossible to get all the colonies into fit shape, and even the strongest are not at their best. Only a meager surplus can be secured, even though the flow may be such that under other circumstances it would yield a fine surplus. It is obvious that by the work of one queen only an insufficient force will be matured for the harvest, but that by doubling up colonies shortly before the harvest we could get a force capable of yielding a good surplus. To double up thus would mean to cut down the number of storing colonies just half. To avoid that it would be necessary to have before the doubling-up exactly twice as many colonies as the location would normally support. Thus it would seem that one should for an early flow winter twice as many colonies as he is to run for the harvest. If the field will profitably care for 100 colonies, then he should winter 200 colonies in order to get the maximum results in surplus honey.

The reverse is true if the apiarist banks his all on a late July or early August flow, such as the buckwheat regions offer. Under normal conditions the bee-keeper finds his colonies reaching their best strength in late June. To keep them up to this excellence for three or four weeks till the harvest opens is beyond the skill of most of us, and will try the wisdom of the best of us. We may think that our bees are still strong, but when the flow begins we may see them die off like flies.

The investigating honey-producer discovers that he can divide one of his strong colonies in early June, and by the judicious use of vigorous new queens get each half into better shape for the late harvest than the old colony would have been if left to itself Why then winter so many colonies? If the locality will support for surplus honey 200 colonies, why winter more than 100? Surely, it would be far better to double up in fall, winter strong colonies, rear a fine lot of early queens, and divide and requeen in early June. This is not the place to describe in full detail such a procedure, and I can but outline the plan

AMERICAN BEE-KEEPER

ADJUSTED FOR USE.

I freely acknowledge that these

methods just outlined are largely theoretical, for I have never put either one of them fully to the test. Yet, in the last three years I have had to modify my own methods to meet certain peculiar local conditions, and I have been led to entertain great faith in what I have outlined above.

Of one thing I am certain, and every apiarist who has had many years of thoughtful experience will concur, I know, that management must be complementary to existing local conditions if one is to look for the best results. I have found that I cannot in Connecticut follow the method which proved so successful in Massachusetts. I have had to modify my method to a large extent, and cannot as yet feel that I have solved the problem perfectly. Where I formerly kept bees the flow usually opened up about May 10th and continued with only slight interruption through June; here there is often a dearth of honey from May 25 till late in June. There a colony which reached swarming strength May 15th would store a good surplus, while one which took till June 15th to become strong would store little or no surplus. Here a colony which reaches swarming strength in May will have a tired-out queen by the middle of June and will not do so well in the July harvest as will a colony which does not reach its maximum strength till late in June.

My July harvest comes too early—July 10th to 20th—to admit of my dividing colonies and getting each part ready for the harvest; but if the flow were ten days later I could make the scheme work to perfection. Even as it is I can divide and get the two halves to do fair work in the sections. And I find that I can build up a wintered-over baby-nucleus so that it will store surplus from this July flow.

The following—almost wild scheme—has more than once engaged my thoughts: Could not an apiarist, who has a very late flow only to count on, reduce all his colonies to nuclei in the fall, build them up slowly the next spring, and thereby gain in saving of stores and in wear and tear on queens more than enough to compensate any possible extra work?

Wildly theoretical that, but it will bear thinking over. And the man who studies his locality, the time and duration of each honey flow, and who tunes his colonies so as to get them to the right pitch for the flow when it arrives, is the man who will make bee-keeping pay.

Norwich, Conn.

HARDSCRABBLE COMES AGAIN.

Here lieth the remnants of Adrian Getaz who "sailed into" Massie. Foolish children. Massie's pieces not yet collected. Headless Queens from Sleepy Hollow Apiaries of By George James. Can't but-in. All business-end. Lazy-bee, lazy-bee, fly away home and hump too. Latham-Miller combine are a rippin it. "Cozy Corner" in my mind's eye there loometh a nondescript mass o' red curtains, brass lanterns, cigar-ribbon pillows and sich. How is it? "Once upon a time—Thats all." Bully formula. Put in the stuffin to suit. "Camera Club," "stuffed" variety or plain "big stick?"

What be I a doin? Just reading the Jan. number. Last week I found an old cronie plum dotty, crazy as a loon. Bimeby he sort of got more easy like and I got his drift. Seems he'd been reading some advice in your paper 'bout picking out a subject and follerin of it back. Started in with one of your contemporaries, hunting up the history of raising queens by transferring larvae. First off he ran into one of them small type set solid all together in one endless sight destroying craze producing non finding fool jumble blanket things which are a disgrace to the name of index. Next off he ran into a sweet thing of an index for each month in the volume so he had to look in twelve places. Bout that time he had his coat off, tie askew and collar wilted. Then he found the subject indexed in one place under "transferring," next under "queen rearing," then "cell cups," then "larvae," then "age of larvae" then "eggs versus larvae" and so on ad infinitum confoundationem. By that time he had sent the guilty parties along the broad highway to——.

Oh I did what I could to smooth his feelins and just as I was doin' nicely he sot down on a pigeon tailed hive. Creak, crash, bang! He was spread all over the shop. Eh? Oh I stepped out and gently closed the door and as I did so I overheard scraps about "selected lumber," "made to fit," "need of lightness," "advancin' prices of raw materials," "autymobils "scripture texts" and so on. He sounded real unreasonable, so I came away. I had to be going anyway.

Some folk is powerful hard to suit.

Well I must mosey along. Bye.

John.

TRANSPORTATION OF SELECT DRONE BROOD BY MAIL.

SWARTHMORE.

IT REQUIRES days of exposure to destroy capped drone brood, in actual experiments it has been proven time and again that drones in the capped stage may be isolated and quite roughly treated for several days without suffering much harm. This hardiness enables us to transport drone-brood by post should occasion demand the practice.

Many times in our queen-rearing experiences has it been found expedient to procure drones from the south, in order that we might get an extra early start in spring; or, perhaps, through neglect and other causes our drone-mothers failed us at a critical time. I myself have paid as high as $8.00 in transportation charges alone on a single lot of drones in nucleus, yet the expenditure seemed necessary under the circumstances existing at the time.

But we can resort to the mails in times of such dire distress and be relieved of quite a considerable expense. Both drone-eggs and capped drone brood are mailable; if properly packed for shipment, either may be safely transported several hundred miles by mail. The capped form is preferable because of its hardiness and extended time limit. Then, besides, capped drones are sooner on the wing. If given to a queenless colony immediately when received these unborn drones will in due time, fly in perfect potency.

The influence of the male bee on the progeny is so marked that in selecting drone-mothers extra care should be exercised. All the points of excellence present in the queen-colony should be quite as evident in the drone colony, if improvement in stock is desired. Although one may select the best breeding mothers rapid deterioration will certainly follow if inferior drones are allowed to fly.

The many possibilities of improvement of the general standard of our bees through the exchange of healthy select drone brood are yet to be fully realized.

Swarthmore, Penn.

NEW YORK STATE BEE-KEEPERS MEET.

The New York State Association of Bee-Keepers' Societies convened at Geneva, December 19, 1906. Resolutions affecting the society's welfare were passed and plans were formulated with a view of advancing the interests of apiculture in the Empire State. Following we give the message of President Marks as delivered before the convention, as also several important resolutions adopted:

PRESIDENT'S MESSAGE.

MEMBERS of the New York State Association of Bee-keepers' Societies, Ladies and Gentlemen: In accordance with the requirements of the constitution of this association, we are met again for mutual economic and social advancement.

At the outset let me urge you to give all questions that may be brought before this convention your earnest consideration. We cannot hope to revolutionize existing conditions in a few short hours, but we can at each convention fix upon some desirable object to be sought through co-operation and having fixed upon such object, we should bend every energy at our command to secure it.

As I have previously stated, you should aim to acomplish at least one such object annually; to succeed, you must have a complete unity of purpose in all matters that make for your industrial welfare and progress.

As a member and an officer, I have not any apologies to offer for past actions of this Association; our experience the past year has more than justified the action of the convention a year ago. I stand today and I trust you do, squarely and firmly upon the platform laid down at that time, which is too familiar to you all, to need repetition.

It may interest you to know that said action on your part was approved, by the fraternal organizations in several neighboring states.

That such action was beneficial, can, I believe, be vouched for by all; further than this, your action at that time demonstrated like nothing else could in so short a time, who among the manufacturers of supplies, were the true friends of the honey producer, and who were their friends for "revenue only."

Your thanks are due the W. T. Falconer Mfg. Co., for the liberal concession cheerfully granted the members of this organization; which they have faithfully observed, in spite of the pressure brought to bear upon them by other manufacturers, to have such concession withdrawn: that action was significant, and demonstrates what some supply manufacturers would do if they had the complete monoply they desire.

Aside from the moral question of right and wrong, you cannot wink at, or ignore the serious condition confronting the honey producer, much as you may desire to do so.

There is but little difference in the highwayman who holds you up at the point of a gun, and the individual or combination of individuals, no matter how moral they profess to be, who hold you up at the point of necessity.

When competition stops, you cease to be your own master, in a sense, and become easy victims, and in the end slaves of a greedy monoply.

There is no branch of agriculture suffering greater injustice at the hands of "allied interests" at the present time, than apiculture.

The amassing of great wealth, the bulk of which has been lured from the honey producers by catch-penny claptraps, has created a despotic condition threatening the very existance of free thought and action. Even now, hundreds of prominent honey producers dare not openly and publicly express their honest convictions.

Should the honey producers tamely submit to the perpetuation of such intolerable conditions?

The friendly and innocent manufacturer does not employ spies to dog your steps, watch every movement and resort to threats and intimidation in order to stifle free speech and suppress facts for fear that an outraged bee-keeping industry will rise in its might, and throttle the octopus that is preying upon it.

At present a solution of the problem lies entirely with the honey producers; they hold the key to the situation; united they are invincible and under the awakened public sentiment of the times they should make the most of their opportunity.

All of the bee periodicals pretend to be published in the interest of the honey producer, but it is significant that out of such periodicals only one, the American Bee-Keeper, has openly advocated your cause, "a square deal" for the honey producer, and rejoiced in your success: One other periodical wavered in its attitude, but a mild hint from the self-styled "allied interests" that if such periodical supported the honey producers in their co-operative movement, it would lose the advertising patronage of the supply dealers, had the desired effect.

The fact is, it is the policy of some bee periodicals to increase the number of honey producers without limit, regardless of the effect it may have upon this industry, and to keep all the honey producers of the country in ignorance of any popular movement that may give them relief from excessive prices on supplies in fact, to suppress all facts that will not serve their selfish schemes; and the pretension that such periodicals are devoted to the interests of the honey producer, only as it effects their own financial interests, is the rankest hypocrisy.

I dislike very much to mention such unpleasant facts but should we longer shut our eyes to this state of affairs, in order to avoid an unpleasant duty? Continued silence and forbearance is, undoubtedly, mistaken for ignorance or cowardice, and the abuses continue to multiply. Nothing but publicity and a vehement protest from the honey producers against such abuses will give relief. "Let us have faith that right makes might; and in that faith, let us dare to do our duty as we understand it." It is easy to see that you, as honey producers, can place but little reliance in these subsidized periodicals, whose course in all such matters is dictated by such a would-be monopoly and its own personal interests, not those of the honey producers. Need I urge you to be loyal to those who are loyal to you? Your thanks and patronage are due the American Bee-Keeper for its loyal support of your cause, and I trust every member of this organization will help in every possible way to increase the circulation of that periodical.

I would recommend that a special fund be created out of moneys heretofore paid over to the National Association to assist in protecting the legal rights of those of our members not otherwise protected, and for such other purposes as may popularize and increase the consumption and demand for the products of our apiaries, and such other purposes, as this Association may from time to time direct. This is a most important matter and should receive early and due consideration at your hands.

I would further recommend that a committee on supplies be made a permanent feature of this organization.

The building up of, and perfecting of such an organization as this, requires time: you should avoid those pitfalls that have proven disasterous in the past, you must provide a foundation that is large enough and strong enough to support a structure that will amply serve the needs of not only the present but future generations of bee-keepers of your state, and of which they may be justly proud.

All members of the organization, in fact all bee-keepers in the state, should realize that one of their first obligations is to their industrial organization, and I would emphasize the fact, that the benefits and privileges of such an organization must not be abused or bartered away, for such a course always has, and always will mean disaster sooner or later, and is one of the means employed by those who would first disrupt, and then prey upon you; hence I would have you realize, that, though the financial obligations may be small, the moral obligations you owe your industrial organization, cannot be computed; remember that alert and tricky foes, are always camping on your trail, ever ready to profit by your mistakes.

RESOLUTIONS.

Geneva, N. Y. Dec. 19th, 1906.

Whereas, we recognize the friendly attitude of the publication known as the American Bee-Keeper, and the good we have received because of that attitude, we hereby recommend that the New York State Association of Bee-Keepers' Societies, in convention assembled, express our cordial thanks to this publication and

Resolved, That the American Bee-Keeper be made the official organ of this Association, and, be it further

Resolved, That a copy of these resolutions be sent to the American Bee-Keeper for publication.

H. L. Case, J. T. Greene, Geo. D. Howe, Committee on Resolutions.

Geneva, N. Y. Dec. 19th, 1906.

Whereas, Formerly we were required to pay but a single profit on bee supplies, that of the manufacturers, the price having been gradually advancing in order to provide a profit for jobbers and hundreds of wholesale dealers, one manufacturer boasting that they have over five hundred such dealers, and

Whereas, We believe that any profit other than that of the manufacturer and jobber are an uncalled for burden, and

Whereas, The W. T. Falconer Mfg. Co. have cheerfully granted the members of this association special rates on supplies that have proven not only very satisfactory but of superior quality and they have fathfully observed the concession granted the members of this association in spite of the fact that other manufacturing concerns have endeavored to get them to withdraw such concessions,

Resolved, That we express our thanks to The W. T. Falconer Mfg. Co. And be it further

Resolved, That a copy of this resolution be sent to the W. T. Falconer Mnfg. Co. and The American Bee-Keeper for publication.

T. I. Dugdale, E. Elthorp, C. V. Clark, Committee.

Geneva, N. Y. Dec. 19th, 1906.

Whereas, The committe on supplies appointed at our session last year were energetic and unselfish in their work, and we have derived so great financial benefit from their efforts to obtain right prices in our behalf, therefore be it

Resolved, That we extend to them our sincere thanks as an expression of our appreciation of their efforts.

H. L. Case, J. T. Greene, Geo. B. Howe, Committee on resolutions.

Whereas, The members of the N. Y. S. A. of B. K. S. have been left without protection formerly provided by the National Association by our withdrawal from that body, therefore be it

Resolved, That the executive committee be instructed to give aid where ever and when ever in their opinion such aid should be given to a member or members who may suffer because of the lack of this protection.

H. L. Case, J. T. Greene, Geo. B. Howe, Committee on resolutions.

Geneva, N. Y. Dec. 19th, 1906.

Whereas, The New York State Department of Agriculture has furnished the State Association and all of the local Societies with the services of the Bee Inspectors at their meetings, therefore be it

Resolved, That we tender the Department our thanks for the valuable assistance rendered and that we recommend that the honey markets in the cities of Buffalo, Rochester and New York be carefully inspected by said inspectors, be it further

Resolved, That the Secretary send a copy of these resolutions to the Commissioner of Agriculture C. A. Weiting at Albany, N. Y.

Chas. Stewart, W. D. Wright, M. Stevens, N. D. West, Committee on Organization.

Whereas, We believe that an over production of amateur bee-keepers is demoralizing and injurious to the best interest of the agricultural industry, that the catchy and delusive advertisements and articles appearing in the papers asserting that there is easy money in bees is not only deceptive but designed to multiply the number of such bee-keepers for the purpose of increasing the sale of supplies and the circulation of supply periodicals, claiming to be devoted to the interest of the honey producers, therefore

Resolved, That this association condemn such method as unfriendly and

3 Photo by F. R. Hoard.

BROOD COMB TAKEN FROM WALLS OF BUILDING.

injurious, not only to the honey producers of this State but of the nation and that we discourage the circulation of such periodicals in this state.

Resolved, That a copy of this resolution be furnished the American Bee-Keeper for publication.

H. L. Case, J. T. Greene, Geo. B. Howe, Committee on resolutions.

Geneva, N. Y., Dec. 19, 1906.

In rearing our queens, let us pay more attention to the selection of drones.

OBSERVING THE HOME LIFE AND HABITS OF THE BEE.

Popular Theories and Guess Work Must Give Place to Positive Knowledge Gained Through Persistent Effort Aided by Modern Appliances.

ARTHUR C. MILLER.

MUCH SMUG satisfaction some persons seem to take in making positive assertions as to acts and habits of bees which they, having never been able to see for themselves, deem it impossible for others to see. It may suffice for bolstering up a reputation made to order by some supply firm, but it is a somewhat hazardous expedient. The American Bee-Keeper has had the satisfaction of exposing several such faked observations and the following will spoil a few more.

One such authority has solemnly said that the field bee on returning with a load of nectar turns it over to a young bee who puts it into the storage cells, i. e., surplus department—the depositing being done by licking the interior of the cell, the nectar flowing from the tongue, a sort of painting process. Recently he has said that the young bee does not go at once to the super with it but may put it into a cell in the brood chamber or hold it and ripen it. His statements have been heralded as new and authoritative. They are not new and they are not correct. A strange coincidence in connection with many of the various announcements by the man referred to is that so many of them appeared at a prior time elsewhere by other writers.

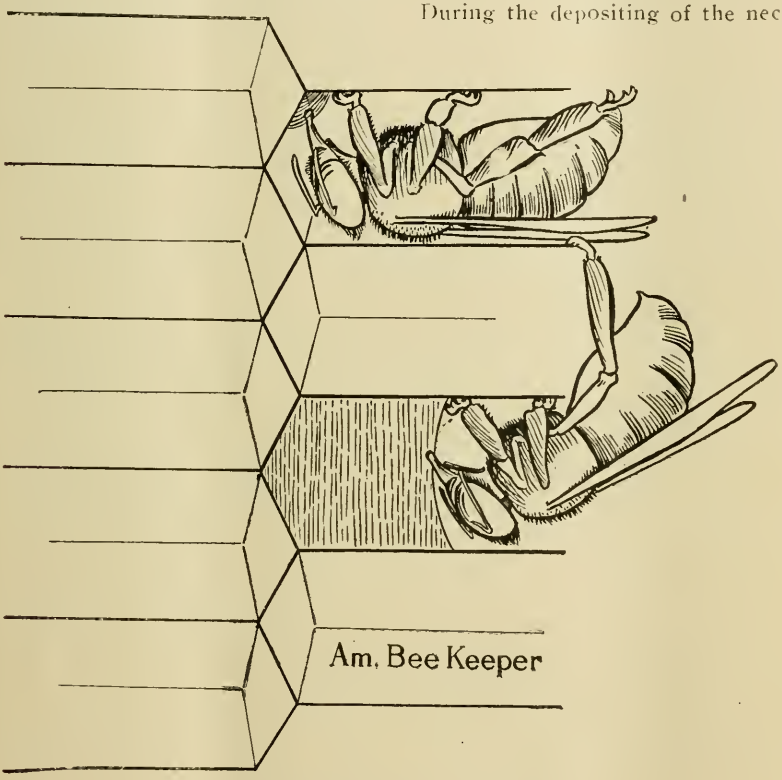
The actual occurrences are as follows: The field bee on returning with a load passes over the combs until she comes to a cell to suit her, which may be anywhere from top to bottom of the comb. Whether the cell be empty or partly filled the bee enters it feet up and back down and advances until the folded antennae reach the honey already in the cell or the cell base. The head is now tipped until the mouth is either against the upper angle of the base of the cell or until the mandibles are immersed in the honey near the upper side of the cell. The mandibles are now worked back and forth, the mouth proper being open, and the nectar from the honey sack is steadily forced out. As the nectar is discharged the bee slowly turns her head from side to side. In the case of the first load placed in a cell it is left adhering to the upper and rearmost corners but it gradually spreads over the base or a little along the floor of the cell, its movement being governed by its consistency.

The tongue of the bee takes absolutely no part in the depositing of the nectar, but is folded up snugly behind the bee's "chin". The gathering bee does not give her load to one of the younger or nurse bees but puts it directly into the cell. From this it is later taken by other bees and ripened and redeposited elsewhere or consumed. Where the nectar is added to some already in the cell it does not at once combine with it but seems separated from it by a film of air, an appearance probably due to the differences in density of the two fluids. When a bee takes honey from a cell the operation not infrequently results in leaving the remaining honey lying in the lower corner of the base or extending along the lower walls. It takes but a very slight jar to dislodge the freshly deposited loads, oft causing them to flow along the lower side of the cell.

The illustrations, drawn from life, show one bee in the act of putting the first load in a cell and of another bee adding to honey which half fills a cell. The bee's "face" or antennae never touch the honey already in the cell. The depositing of a load is very deftly done and takes on an average about forty seconds.

These discoveries shed much light on the mixing and shifting of honey, and incidentally show the great danger of permitting any sugar syrup being present in the hive when the bees are storing surplus, for if it is present it is pretty sure to be mixed with the honey and get into the supers.

During the depositing of the nectar in the cells the openings on the mandibles of the ducts of the "Wolff's glands" are covered by it, and as the mandibles are steadily moved it is reasonable to presume that the glands are pouring forth their secretion. In the American Bee Keeper for January, 1904, I described the bee's manner of "ripening" nectar showing how the glands were then given a similar opportunity to add their secretions



BEES DEPOSITING HONEY IN THE CELLS.

to it. The function of those glands has long been obscure, but from the foregoing I believe, it is reasonable to ascribe to them some part in the conversion of nectar into honey.

Providence, R. I.

HOW THE LITTLE BUSY BEE DOTH.

W. W. MC NEAL.

CONSISTENCY may be a jewel all true enough, but there is no pressing demand, apparently, for jewels of that sort in the fine art of honey production.

Even the little busy bee caught the spirit of the times and now looks with distain (?) upon the stupidity of whiling away each shining hour among the brambles of nature seeking the sweets we love so well. Verily the world "do move," for the records inform us that away back in the hazy past the honey bee did not make honey, she gathered it from plants and flowers. However, it is refreshing to know the bees are learning, that they no longer act without a "reason" or without a "cause" as it has been tersely put.

We are told the old box-hive and system must go; that it is behind the times; that it is a menace to progressive apiculture. In those days when bees stored pure honey in their waxen combs 'twas all right, though.

Now the situation is changed. It has been discovered that bees make honey (?) The modern hive helps some, too. What's the "hodds" if the product is lacking in flavor so long as glucose—Ah, there's the rub. I must forbear. But I insist. Why the difference—why is the one a crime and the other not? Can you tell?

Two children were playing together. They were presented with some apples. One of them very deliberately took the largest apple. The other said, "You selfish thing! why did you do it? I wanted it myself."

Perhaps I am wrong in my deductions. But let us look into this matter, be consistent and get square with the public. If bees can really and truly make honey out of commercial sugar, then why not out with the whole truth? "Poor policy" did I hear you say? Policy nothing! We should stand more on principle, live and let live. That which is good for the gander should also be good for the goose. But suppose the bees can't turn the trick, then what? Why, then every honest producer of honey should set down on the practice of sugar feeding and set down on it hard.

The whole world wants honey, I mean pure honey. It wants honey of luscious sweetness, the kind (grade) bees store in the caps of those same hated box-hives. That is honey. Consumers are tired of being offered a substitute. Bees may modify sugar syrup and store it in combs as white as the driven snow, but they can't do the work of the flowers. These silent exponents of a better world extract from the universal kingdom a finer article by a finer process. There is nothing in the whole category of saccharine substance that can for a moment compare with the finest grades of nectar, and all the ingenuity and cunning of men can never enable bees to make honey out of any thing else.

The use of sugar in the apiary can hardly be justified on any grounds save to prevent starvation of the bees; but the indiscriminate use of it is a wanton shame and should be denounced by every lover of a square deal.

The presumption that the combs of the brood chamber may safely be stored with syrup prior to the honey harvest, providing it is done in time for the bees to cap it, is shown up by the fact that not one of the advocates of that method will consent to feed a dark-colored mixture.

There may be times when very little of the syrup is carried into the supers; but it is a questionable practice, one that always casts a suspicion over the honest work of the bees.

It is well-known bees do not change the color or flavor of anything they gather and store, nor can they add flavor when it is lacking. That which is of an inferior nature at the start is of the same poor stuff when it has been deposited in the combs.

Bees may be able to change raw sugar syrup into the grape sugar of pure honey by partial digestion. But was ever a bee known to be so lazy as to allow the syrup time enough to undergo the proper changes in her honey sac when there was a lot more of it waiting to be licked up and plenty of empty combs at her disposal?

A cooked potato is different in some respects from a raw one, the starch in it has been changed and is therefore more easily assimilated by the system. The process of cooking has partly digested it; but who will say the potato is not still a potato? Such is the case with sugar syrup, the bees may make it more available, perhaps, for immediate digestion but its identity remains the same. But it does not necessarily follow that all pure nectar becomes pure honey in the strictest sense of the word. Man here again intervenes, or rather interferes with the work of nature by the untimely aid of comb foundation and ready-drawn combs. This was not the original purpose, for honey stored in virgin comb—comb constructed for the occasion—is the only kind that really comes up to the true standard of excellence.

It is always riper when capped over in the combs though its density may not be any greater than that stored in readymade combs. Extracted honey more properly comes under the head of evaporated honey and no doubt the percentage of raw sugar will often be found considerably above that laid down by the U. S. Department of Agriculture as the true standard of purity in honey.

The freer disposition of extracted honey to granulate proves quite conclusively that it did not undergo the proper changes. I would not be understood as claiming this to be the sole cause of the increased tendency of extracted honey to granulate. Exposure to air and especially cold air has much to do with it. Honey bottled and sealed while hot will remain in the liquid state a much longer time. Comb foundation does not permit of such rapid storage as the completed combs, but the work is still carried on much faster than when bees are forced to build their own combs. The broad expanse of foundation enables a large force to engage in the work at the same time and the side walls are quickly drawn out. If there be a rush of the incoming nectar, can any one doubt that much of it is prematurely stored in the partly completed combs?

In a state of nature, the foundation of the comb is laid by a very small force of bees. No matter how urgent may be the demand for comb, the work can not be unduly hurried for only a given number of bees can work at the same time.

Right here I wish to say however, that I don't believe comb is ever constructed merely for storage purposes. I have all due respect for those who think differently, but I must be shown. If figures don't lie in this case, they are, to say the least, very misleading. The septum of drone comb offers no advantages for rapid construction over that of worker comb. The side walls in either case can be drawn out ten times as quickly for the bees can apply themselves to that part of the work en masse. So wherein is there any gain in the saving of time?

Regarding the claim that drone comb requires less wax, that may be so, but I deny that this is the object of the bees in building it. At such times there is usually an excess of wax instead of a shortage in the supply, a statement easily verified. The object of drone comb is clearly for the purpose of rearing male bees and any thing that transpires to make the colony anticipate the need of them will sway it to that end.

What we need to reclaim the honey business is more of that kind of honey the bees made before they learned the short cuts in the fine art. Honey should be allowed to age on the hive when the bees are through with it, during the summers. This gives to it the unmistakable expression of bees, and that rich, mellow flavor thereby added to it will again win universal praise for honey above every other known sweet.

Wheelersburg, Ohio.

ANNUAL MEETING OF THE WORCESTER COUNTY, (MASS.) BEE-KEEPERS' ASSOCIATION.

The seventh annual meeting of the Worcester County Bee-Keeper's Association was called to order Saturday, January 12, 1907, in Horticultural Hall, Worcester, at half after two, by President Burton Gates. After brief reports, the following officers were elected: President, Burton Gates of Worcester; Vice-President, F. H. Drake, East Brookfield; 2nd. Vice-President, Charles Goodell, Worcester; Secretary and Treasurer, Arthur H. Estabrook, of Leicester.

Considering the weather, which was the worst for more than a week, there was a very large attendance, there being present nearly forty bee-keepers.

Particular attention was payed the status of bee disease in this state. A copy of the proposed bill for the State of Connecticut, for protective legislation against bee diseases was at hand and discussed. Not a little favor of inspection in Massachusetts was manifest. The Secretary was directed to correspond with the Massachusetts Bee-Keepers' Society and see what steps shall be taken. Further details of the status of disease and the feeling toward inspection are desired.

The hope was expressed that inspection would not only reduce the diseases of the state, but that it would do much to elevate the bee-keeping methods and do away with the primitive box hives now not a little used in this state.

It was voted to hold on the 9th or 16th of February (according to the convenience of the speakers) an all day convention and institute with the State Board of Agriculture. The full program and exact date can be learned from the Secretary. There will also be a banquet at noon. Everyone is invited to attend the meeting and the banquet, (the price of which will be fifty cents). All sorts of implements, of inventions and the products of bees are solicited. Table space will be furnished. The gathering, as last year, will bring together several hundred of the representative bee-keepers of New England. You can not afford to miss it.

Details from the Secretary.

A. H. Estabrook,
Clark University.
Worcester, Mass.

THE MINNESOTA BEE-KEEPERS' ASSOCIATION.

At the annual general meeting of this Association, held on Dec. 5, 6 and 7, 1906, at the First Unitarian Church, Minneapolis, all the old officers and a few of their friends withdrew from the association in consequence of an adverse vote, and proceeded to organize a society of their own; thus subordinating the interests of the association to their own private feelings. No comment on such action is necessary.

Freed from this element of discord in its ranks, the association now hopes to be able to achieve something of real use to bee-keepers.

Steps are being taken to prepare an effective foul-brood law and to get it passed by the legislature; the inspectors report having demonstrated the pressing need of such a law. In the future, steps will also be taken to disseminate useful information amongst our members both in regard to bee-keeping and the prices and marketing of honey.

The system of distribution of supplies inaugurated by the Committee on co-operation, by which our members are enabled to obtain supplies in small quantities at jobbers' prices, will be continued, and full information will be given to enquirers by the chairman of the committee, W. R. Ansell, St. Paul, Minn.

A system of gratuitous instruction by bee-keepers in the public schools will be advocated, and attention is directed to Prof. A. W. Rankin's remarks on the subject.

Suggestions are solicited from bee-keepers, whether members or not, on any points by which they think the association may be made more useful, especially along the lines of co-operation. The process of effective co-operation will necessarily be slow, but the association aims to bring all the bee-keepers of the state into closer touch with one another by means of more frequent general meetings and by means of the circulation of such information as will be conducive to more profitable bee-keeping. The more members the association has the easier and more effective such work will prove, and the committee hopes that all bee-keepers will help the movement by joining the association.

Membership dues of $1.00 a year (including membership to the National Bee-Keepers' Association) should be sent to Secretary, Mr. Chas. Mondeng, 148 Cedar Lake Road, Minneapolis, Minn.

PUBLISHING CROP REPORTS.

Leota, Miss., Dec. 6th, 1906.

The American Bee-Keeper—Your article, "Yield in Germany and America" page 269 has attracted my attention. The Doolittle yield of "100 pounds per colony" is wonderful only when brought into contact with the 10 pound yield in a good season. Believing that a statement from many parts of the states and elsewhere would be interesting reading, I propose that we tell what we know on that subject. I suggest that each person shall give the yield of honey and wax yearly for five consecutive years begining in 1902 and ending in 1906.

1902. I started with 24 colonies and increased to 54. Extracted 2,688 pounds honey. Rendered 92 1-2 pounds wax.

1903. Had 80 colonies and increased to 145 colonies. Extracted 24,000 lbs. honey. Rendered 247 lbs. wax.

1904. Had 154 colonies and increased to 170 colonies. Extracted 12,000 pounds honey. Rendered 140 pounds wax.

1905. Had 154 colonies and increased to 168. Extracted 6,285 pounds honey. Rendered 79 pounds wax.

1906. Increased 160 colonies to 167. Extracted 19,800 pounds honey. Rendered 300 pounds wax.

Trusting that these figures will provoke a discussion along interesting lines. I am, Very truly,

Tho. Worthington.

THE

American Bee-Keeper

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ADVERTISING RATES.

A limited number of strictly legitimate and acceptable advertisements will be inserted at the following rates:

Regular advertisements (agate measure) 15 cents per line.

Reading notices (set in nonpariel) 20 cents per line.

Special location, 25 per cent extra. Cuts inserted without extra charge.

DISCOUNTS—On continuous insertions we allow the following: Three months (3 times) 10 per cent. Six months (6 times). 20 per cent. Twelve months (12 times). 30 per cent.

HOW TO ADDRESS.

The home office of the American Bee-Keeper is at Falconer, N. Y., and all matters relating to subscriptions, discontinuances, changes of address, advertising or other business should invariably be addressed to the Falconer, N. Y. office.

Matters relating to the editorial department—Manuscripts, photographs, or correspondence in any way referring to articles that have been or are to be published, should be addressed to The American Bee-Keeper, Fort Pierce, Florida.

DISCONTINUANCES.

The American Bee-Keeper will be sent continuously until it is ordered stopped and arrearages, if any, are paid. Those who wish the paper discontinued at the expiration of the time for which they have paid, have only to request that it be done, and no copies will be sent thereafter.

SUBSCRIPTION RECEIPTS.

We do not acknowledge receipt of subscriptions. Your receipt of the journal is evidence of your subscription having been entered. The date printed upon the wrapper label of your paper indicates the time to which you have paid. Our subscribers will confer a favor by observing the date, as noted, and promptly renewing or requesting the paper discontinued at expiration of time paid for, as may be desired.

Massachusetts, Rhode Island and Connecticut are all moving for laws for the suppression of bee disease. (M).

How long is the absurd statement that bees differentiate the food of queen and worker larvae to be repeated? You say it is self evident and analysis proves it! Far away wrong. Guess again . (M).

We desire to call our readers' attention to the article in this issue by Allen Latham on "How Many Colonies Shall we Winter." It contains food for thought and suggests possibilities in the economics of apiculture which may mean much to followers of the craft. (M).

J. A. Green, in Gleanings, is giving bee- keepers some cold hard facts about frames and sectional hives. The same points, and more, have been fully set forth in our columns in the past. The gist of the matter is that whatever frame or hive you use it must be used with brains. (M).

Mr. Frank Rauchfuss, of Colorado, one of the leading lights of western apiculture, has been experimenting for several years with Caucasian bees, and while they have not shown themselves to be so bad as some have "made out" —the writer, for example—thus far they have not equalled the Italians as honey gatherers. (H).

The editor of the American Bee Journal says we were in error in stating that he referred to the American Bee-Keeper as an obscure publication, and that the reference was to some government bulletin instead. The Journal is not usually so ambiguous, and there is no doubt that every reader of its comments at the time must certainly have applied them to The Bee-Keeper. We are glad, however, to have Editor York's assurance that he is "not guilty," and he is hereby exonerated. (H).

NEW BEE JOURNAL ANNOUNCED.

Another "Independent" paper devoted to bee culture is soon to appear. We are told that California is to be the seat of the enterprise and our informant says that it is backed by all that is necessary to make it a success including a list of names of the "parasites who seek to wax fat on the producers" and these same will be politely made to keep out. (M).

THE DOCTRINE OF QUALITY.

Mr. Hutchinson of the Review is urging the production of better honey, a crying need of the industry of today. The Review is the only other bee paper in this country besides The Bee-Keeper that has a practical bee man at its head. It is particularly a paper for specialists but the writer knows of many beginners who find it a great help. To impress upon beekeepers the need of quality over quantity is even more important to those just starting than to the veterans, the latter usually have had some forceful lessons by experience. (M.)

MORE LEAGUE COMPLICATIONS.

In a recent letter General Manager France asks us to state that he was never a member of the late League. We are unable to find that he has before made disavowal of his connection therewith. The literature sent out by the League bore the name of Mr. France as a member of the Executive Committee. Some of the founders of the League are still active in the affairs of the National and pose as champions of the rights of the honey producers. What dependence can be placed upon them if they, without authority, used the name of the leading officer of the National to further their own schemes?

And why did not Mr. France make earlier disovowal?

The members of the National are entitled to a prompt explanation from all parties. (M).

MATING IN CONFINEMENT.

In a recent number of Gleanings there is recorded another experiment with confining drones and queens for mating. The cage was of wire cloth and was about thirty feet high by the same diameter. The result was failure, the drones and queens killing themselves by butting against the wire. Cotton mosquito netting it is now believed will obviate that trouble and the editor suggests that common cotton cloth may do. He is only about six years behind hand on that point as it was tested out pretty thoroughly in Rhode Island by the writer in the season of 1900 and subsequently. To save our readers loss in making random and misdirected experiments we would say that the chief difficulties are in the queens and drones, mostly in the latter. Our advice to would-be experimenters is to let the matter alone until more is known about drones and queens, their virility and the conditions which limit or increase their activities. These matters have for several years been the subject of study by trained minds and the results will in due time appear in these columns. (M).

FAREWELL, KARO CORN!

The great glucose trust which spent fortunes to mislead the public into believing that its spurious product was "better than honey for less money," it is said has been put out of business by the pure food laws now being enforced. The fact is, no amount of good advertising can continue to fool even a majority of the people very long. People who had ever tasted good honey would readily recognize the odiousness of the comparison upon opening a can of this glucose mixture. That the gigantic swindle has met its fate so promptly reflects credit not upon the excellent laws alone, but also upon the sense and judgment of the consuming public.

Now the great corporation is said to be shipping its wares yet unsold, to foreign countries having no pure food laws, or laws less stringent than those of the United States, in order to unload its stock. The pure food movement should become universal, so that such gigantic impostors might find no quarter on God's footstool. The matter is being stirred up in Cuba and it is to be hoped that radical measures may be adopted in the little republic that has heretofore been the dumping-ground for the spurious food stuff of all nations (H).

HIVE COVERS.

The editor of the Review has never used quilts over the frames. He says: "The tops of my frames are bee-space below the top of the hive, and I use a flat cover. If any one thinks I ought to use them, I wish he would write."

The bee-space over frames is no barrier to the use of a quilt if one desires to use it. Individual tastes and methods of working must determine preferences in regard to frame covering. For summer use, with hives nicely shaded, a well-fitting flat lid is all that is needed and is, perhaps, the acme of perfection, but they do not admit of the moderate winter ventilation and absorbant qualities desired in some instances.

In making early spring examinations, as to the strength of colonies just out of winter quarters, the quilt is a decided advantage. Instead of having to pry loose a propolized lid or honey-board, the apiarist can jerk back the quilt and replace it in one second, ascertaining the approximate strength of the colony closely clustered upon the brood on a cool morning. If it becomes necessary to perform some slight operation at a time when robbers are troublesome, such as to remove or insert a frame of honey it is not necessary to expose the whole top of the frames, when quilts are in use. It may be turned back just far enough to expose the frames wanted, and may be flopped back in an instant, with one hand, and the hive thus closed.

The ideal hive covering, for a northern climate, is a flat lid with a rim admitting of the use of a sawdust cushion inside, with a quilt over the frames. In the south, a flat lid with honeyboard and air-space between, fills the bill exactly. (H).

AS TO THE WISDOM OF BEES.

"Bees act now as they did in the beginning. The fossil-bee and its work, as it existed sixty centuries ago, does not differ from the bee of today. The comb was the same; their habits have not changed; they have learned nothing. While man may have been a monkey then, according to Darwin, a bee was not a gnat. While the regularity and perfection of the bee's work are proof to the novice that they are endowed with reason, they prove to the naturalist that they are devoid of will or discretion."

D. L. Adair, 1872.

Will the readers of the journals show their papers to their neighbor bee-keepers and if possible induce them to subscribe, and in this way help them to learn, at least, the value of their own product?

OUR COZY CORNER

BY HARRY E. HILL

PHOTOS FOR HALFTONE REPRODUCTION.

Several correspondents have inquired as to whether it is important that photographs for reproduction be finished on glossy paper.

It is not at all important. In fact, a semi-matte paper is preferable for halftone copy. For some years following the introduction of the halftone process of engraving the theory prevailed that the use of a glossy stock, squegeed, the detail was thereby brought to the surface and more readily imparted to the printing plate. My own experience, as well as that of many others is that the highly polished surface is rather a detriment than a benefit.

I recently submitted to our engravers—one of the best houses in New York—two prints from the same negative, one finished on dull, semi-matte and one squegeed glossy, and told them to make a halftone from the copy they preferred and to let me know why they preferred one copy to the other. The answer came: "We shall use the dull finish, of course. It has all the detail of the other, while there will be no reflection to contend with."

However, as an object lesson for our camera users, we show herewith halftone reproductions from both of these prints—one from squegeed, and one from the dull finished copy. This one example of the error now prevailing in favor of glossy copy, should be sufficient to dispel it. Nobody could tell which was made from the glossy photograph—they are as near alike as two peas.

Further, it is almost impossible to "doctor" any defects on a squegeed print, while the dull surface has a "tooth" to facilitate retouching with a pencil.

These photographs show a portion of the last edition of The Bee-Keeper in course of preparation for mailing.

MAKING A BETTER JOURNAL.

Occasionally there comes even to the editor of a bee journal a deliciously fragrant boquet. That is, words of cheer, expressing appreciation of the editor's uncreasing effort to furnish his readers with an interesting paper. Such evidences of appreciation came as a zephyr of springtime, thrill the very soul, enthuse and inspire. Read the following, from a Connecticut subscriber who has but recently joined our circle:

"What do I think of the American Bee-Keeper for January? I think that you have given good value to your subscribers, and that anyone who is not willing to subscribe 50 cents a year to that paper has small intellect. My only regret concerning the American Bee-Keeper is that I did not subscribe 16 years ago. But this last number certainly surpasses anything you have got out before to my knowledge.

There is scarcely a thing in it that does not interest me, and that is something which I can rarely say of a bee-paper, for usually there are articles or items which do not appeal to me at all, and I skip them. I have read this number from end to end, including some of the ads."

It is almost too much to hope that even this one patron may find each future number of The Bee-Keeper so

MAILING THE AMERICAN BEE-KEEPER.

uniformly interesting, but it will be the constant aim of The Bee-Keeper to not only maintain its present standard, but to continually improve its quality.

In order to attain the degree of perfection to which it aspires, it is essential that the bee-keepers themselves become, to an extent, active participants in the work and promptly report for publication everything deemed of general interest to the fraternity. It is impracticable for The Bee-Keeper to send a representative

MAILING THE AMERICAN BEE-KEEPER.

to investigate the working plans of all its readers; but it makes this personal appeal to each and all to assist in the dissemination of apiarian knowledge, by a free exchange of thought, through the medium of its columns. Pert, pointed paragraphs and plenty of pictures, are always wanted, and for good material of this kind, as well as interesting articles, payment will be made during month of publication.

Photo. No. 3, in this issue was taken by Mr. F. R. Hoard, of Providence, R. I., a keen sportsman with the camera as well as with the rod and gun. By the way, this gives me an opportunity to present to Bee-Keeper readers another likeness of the associate editor. He sent the picture, not for publication, but to illustrate a story as to how he had to remove a colony of bees that had taken up their abode between the walls of a shed at a sportsman's club near Providence. The proportion and size of the brood comb might lead one to think that it had been out from a standard L. frame.

PAYING AN OLD DEBT.

Sometimes there are real funny things happen, even in a bee journal office, where the work is usually prosaic and hum-drum.

I presume on every subscription list there are a few names with which one becomes familiar and which are regarded as "slow pay." The other day, in going through The Bee-Keeper mail I came to an envelope from an old subscriber whose account had been permitted to run behind about two years. "Ah," thought I, "I knew he'd get around to it some day," and imagined I could see the blue money order for $1.00, paying up for three years, right through the envelope. I tore it open and read.

"Keep on sending The Bee-Keeper right along. I don't want to miss any of them, and I'll send the money when I sell my honey."

The fact that this patron did not want to miss a single number bore evidence to the fact that he was sensible, and we were glad to accommodate him, but I couldn't help thinking of Humphrey Johns.

While going to his work one morning and meditating upon the fact that he owed the doctor a big bill and had only $3.65 with which to pay him, Rufus Gadsten, a carpenter, was accosted by a plainly dressed stranger.

"You're Mr. Gadsten, aren't you?" asked the stranger.

"Yes, sir," he replied.

"Used to live in Milwaukee, didn't you?"

"I did."

"Do you remember lending sixteen dollars to a man up there named Humphrey Johns about nineteen years ago?"

"Yes, I remember it distinctly."

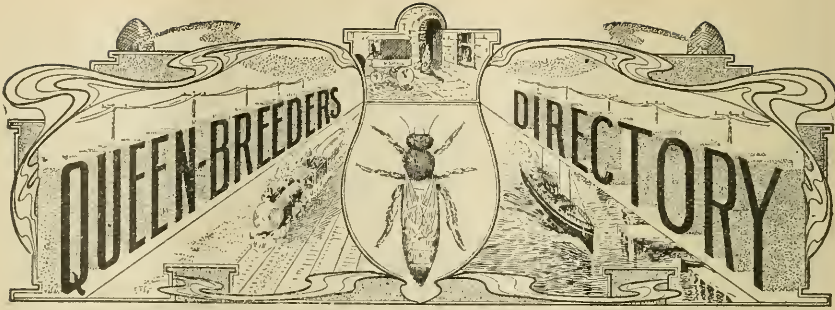
"He never paid it, did he?"

"Never."

"Well," pursued the stranger, with emotion and shoving his hand into his pocket. "I'm Humphrey Johns. I have never forgotten that debt, and I'm going to pay it with interest some day, but I'm a little hard up just now. Do you suppose that you could lend me half a dollar for the sake of old acquaintance."

Burton N. Gates, Clark University, Worcester, Mass., is using a camera to excellent advantage in recording his scientific work. The Bee-Keeper has received a number of fine illustrations from Mr. Gates, which will appear in connection with his instructive articles.

The photographs used to illustrate Mr. Miller's article on Bee Veils, in this number, were made by H. E. Hill.



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QUEENS HERE.—We are still asking you to give us your trade. We sell Italians, Goldens and Carniolans at 75c for untested and $1.00 for tested. Price on quantities and nuclei upon application. JOHN W. PHARR, Berclair, Texas. Jan.6

SWARTHMORE APIARIES, SWARTHMORE, PA.—Our bees and queens are the brightest Italians procurable. Satisfaction guaranteed. We are breeding the Caucasians absolutely pure from direct imported stock.

W. W. CARY & SON, LYONSVILLE, MASS.—Breeders of choice Italian bees and queens. Imported Leather and Root's Red Clover strains. Catalogue and price list FREE.

MOORE'S LONG-TONGUED STRAIN of Italians become more and more popular each year. Those who have tested them know why. Descriptive circular free to all. Write J. P. Moore, L. Box 1, Morgan, KY.

BETTER THAN AN ISLAND—No other bees within five miles. All fast trains stop here. I consider the Banat Caucasian bees the best and gentlest in the World. One colony made 32 fancy sections of comb honey during September, seventy Italian colonies did not make a pound. Banat Caucasians bred here, other races in out yards. Banat Caucasian queen $3.00. Caucasian queen $1.50. Golden Italian 75 cts. Order now D. Collins, Ph. D., Emporium, Pa.

THE A. I. ROOT CO., Medina, O.—Breeders of Italian bees and queens.

QUALITY QUEENS are the best Italians yet. Send for circular. H. H. JEPSON, 182 Friend street, Boston, Mass.

BREEDING FROM SELECTION MERELY rejects the poorest. Long harvests, high mountains and deep blossoms improves the best. For queens bred along this line address for particulars, C. W. DAYTON, Chatsworth, Calif.

W. J. DAVIS, 1st YOUNGSVILLE, PA. breeder of choice Italian Bees and Queens. Quality, not quantity, is my motto.

ITALIAN QUEENS AND BEES. E. E. Mott, Glenwood, Mich. Money Order office, Decatur, Mich. Jan. 8.

D. J. BLOCHER, PEARL CITY, ILL—Caucasian and Italian Queens reared in separate yards. Safe arrival of all stock guaranteed. Circulars and price list free. Jan.7

JOHN M. DAVIS, SPRING HILL, TENN.—Has greatly enlarged and improved his queen-rearing facilities. Two unrelated Carniolans and a dark leather Italian lately imported. My own strains of three-band and golden; "Moore's" long-tongue; Doolittle's golden; all selects. Carniolans mated to Italian drones when desired, No disease. Circular free.

WE are now booking orders for Providence Queens for spring delivery. Cull & Williams, Providence, R. I.

HOOPER BROS.' Italian Queens reared in the West Indies are the most prolific and give the best results available any time of the year. Write at once for information to Kingston. Jamaca, B. W. I., Box 162 Nov 6

BUY YOUR QUEENS from the Red Clover Apiary. Bees guaranteed to work on red clover. Fine 3 and 5-banded untested Italian queens, 60 cts. Tested, 75 cts. If wanted before June 25, add 15 cts to above prices. J. L. Fajen, Alma, Mo. Dec. 7.

MY GOLDEN ITALIAN breeding queen produces bees that do not know enough to stay in the hive when it rains. They are hustlers. Caucasians, bred from an imported Queen. Queens mated in yards 6 miles apart. Satisfaction and safe arrival guaranteed. Both queens and supplies are A No. 1. Agents for The W. T. Falconer Mfg. Co's be supplies. J. R. Rambo, Collingdale, Pa.

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WE are always in the market for extracted honey, as we sell unlimited quantities. Send us a sample and your best price delivered here. The Fred W. Muth Co., 51 Walnut St., Cincinnati, O. 5-5

10 SOUVENIR POST CARDS.

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Advertising in the Directory Brings Results.

HONEY AND BEESWAX MARKETS.
(Dealers' Selling Prices.)

Albany, N. Y., October 29.—Clover (fancy) 15 tc 16; No. 2, 14 to 15, Mixed, 12 to 13; Buckwheat, 12; Extracted, white 7 1-2, mixed 7 to 7 1-2, buckwheat and dark 6 1-2. Advise shipping honey by freight only. H. R. Wright.

Chicago, Dec. 17.—There is the usual dullness in the honey trade at this date owing to most of the retailers having stocked up sufficiently to carry them over the holidays; but the stock in the hands of the trade generally is below the normal; hence prices are firm at 15 to 16 cts. for No. 1 to fancy white comb with off grades at 1 to 2 cts. less, amber grades dull at 10 to 12 cts. Extracted white firm at 8 cts. for clover and basswood; ambers 6 1-2 to 7 1-2 cts. per pound. Beeswax 30 cts. per pound. R. A. Burnett & Co.

Cincinnati, January 9.—The comb honey market is very quiet. Holders of this article are not trying to realize a profit, simply disposing of what they have, at cost. Fancy comb honey is selling at 14 1-2 cts to 16 cts. Quote extracted amber honey is barrels at 6 to 7 cts. Fancy light amber in cans at 7 cts to 8cts. Fancy white, 9 cts. For strictly choice beeswax, we are paying 30 cts per lb., delivered here. The Fred W. Muth Co.

Denver, January 5.—There is practically no honey left in the hands of producers in this State and barely enough in the Denver market to supply the home trade until spring. We quote strictly No. 1 white per case of 24 sections, $3.20; No. 1 light amber, $3.00 and good No. 2, $2.80; white extracted 8 to 8 1-2 cts.; light amber 7 3-4 to 8 cts. We are in the market for Beeswax and pay 26 cts. per lb. for clean yellow wax delivered here. The Colorado Honey Producers Ass'n.

Kansas City, Mo., January 7.—The supply of comb honey is fair. The demand fair. The supply of extracted is very light—demand good. We quote fancy white comb 24 sec cases, $3.25; No. 1 white comb 24 sec cases, $3.00; No. 2 white or amber 24 sec cases, 2.75; extracted white per lb., 7 1-2 and 8 cts; extracted amber per lb., 7 and 7 1-2 cts; beeswax per lb., 27 cts. C. C. Clemons & Co.

New York, Nov. 11.—Comb honey: There is a good demand, principally for fancy stock of both white and buckwheat honey. Mixed and off grades are more or less neglected. Receipts have been quite heavy of late, but there is no over-stock whatsoever, as the demand has been good right along. We quote fancy white at 15 cents; No. 1 at 13 to 14 cents; No. 2 at 12 cents; buckwheat and mixed at 10 to 11 cents per pound. Extracted honey: Demand good, especially for fancy grades. Prices are ruling higher. We quote California white sage at 7 1-3 cents to 8 cents, light amber at 7 to 7 1-2 cents, amber at 6 1-2 to 7 cents per pound; lower grades, in bbls. at 55 to 65 cents per gallon, according to quality. Beeswax quoted at 29 to 30 cents per pound. Hildreth & Segelken.

Toronto, Canada, Dec. 15.—The market today is ranging from 11 to 12 cts. for No. 1 Clover honey, Buckwheat honey and the darker grades selling from 6 to 7 cts. White & Co., LTD.

Worcester and Boston, January 16.—Our honey market is very firm. There is only a small quantity in our market, all stock cleaning up well. Think there will be no doubt but what all good honey will be closed out in good season at firm prices. W. H. Blodget Co.

Cent-a-Word Column.

DO NOT burn your refuse from Wax Extractor. Send it to me and get your cash. Archie L. Coggshall, Groton, N. Y. tf

AGENTS WANTED—To sell advertising novelties, good commission allowed. Send for catalogue and terms. American Manufacturing Concern, Falconer, N. Y.

350 HIVES OF BEES FOR SALE. They are in Standard Hoffman 8 Frame Hives on a good Alfalfa range. Address N. H. Bartleson, 120 E. Huerfano St., Colorado Springs, Colo.

WANTED.—No. 1 white and amber and buckwheat extracted honey in 60 lb. cans or barrels. Send sample and quote lowest price delivered in Preston. M. V. Facey, Preston, Fillmore county, Minn.

FOR SALE—45 colonies of bees, excellent strain, no disease, several hundred hives, foundation mill, dipping tank, Cowan honey extractor and numerous other appliances. Located in Florida. Cheap for cash. Address, S. B. C. Care American Bee-Keeper, Fort Pierce, Fla.

INCREASE is a hadsome little book telling how to form new colonies without breaking working stocks. A simple, sure, satisfactory plan, 25c. Baby Nuclei tells how to mate many queens from sections with a mere handful of bees; 42 pages, 20 pictures, 50c. Cell Getting tells how to save labor in rearing queens, 50 cents. Queen rearing outfits. Golden all-over and Caucasian Queens. Circulars free. E. L. PRATT, Swarthmore, Pa.

WANTED:—by Chicago wholesale and mail order house, assistant manager (man or woman) for this county and adjoining territory. Salary $20 and expenses paid weekly; expense money advanced. Work pleasant; position permanent. No investment or experience required. Spare time valuable. Write at once for full particulars, and enclose selfaddressed envelope. Address.
GENERAL MANAGER, 143 E. Lake St., Chicago.

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HAS MADE ALL THE IMPROVEMENTS IN

Bee Smokers and Honey Knives

made in the last twenty years, undoubtedly he has made THE BEST ON EARTH

Smoke Engine, 4 inch stove none too large, sent postpaid	$1.50
3 1-2-inch	.90
3 1-2-inch	1.10
2-inch	.70
3-inch	1.00
Little Wonder, 2-inch	.65
Knife	.80

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Falconer, N. Y.

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Our Special Premium Offer

We have been successful in closing a contract with the Selden Pen Mfg. Co., of New York, whereby for a limited time we can supply a guaranteed

$2.00 Gold Fountain Pen,

"DIAMOND POINT."

and the American Bee-Keeper one year for only 90c to every subscriber, old or new. The pen will be forwarded immediately upon receipt of the money. It is made of the best quality of hard rubber in four parts, and fitted with a guaranteed irridium pointed 14-k GOLD PEN. The "fountain" is throughout of the simplest construction and can not get out of order, overflow, or fail to supply ink to the nib.

"A FOUNTAIN PEN IS A NECESSITY OF THE 20TH CENTURY."

It dispenses with the inconvenient inkstand and is always ready for use.

"THE DIAMOND POINT" bears the manufacturer's guarantee that the pen is solid GOLD, 14-k fine. If it does not prove satisfactory in every way we will exchange it for another, or return the fifty cents additional upon return of the pen.

This is an unusual opportunity to secure, at a very low price, an article of superior quality that is coming to be essential to the comfort and convenience of every one. Remember this offer is for a short time only.

The American Bee-Keeper, Falconer, New York

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The publishers of the Agricultural Epitomist, Spencer, Indiana, (the only agricultural paper that is edited and printed on a farm) have made arrangements by which they can offer with each three years' subscription to their paper at 50 cents, a copy of

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absolutely free, postage prepaid. You should not overlook this opportunity to secure one of the foremost farm monthlies in the country, together with this valuable book at the price of the paper alone.

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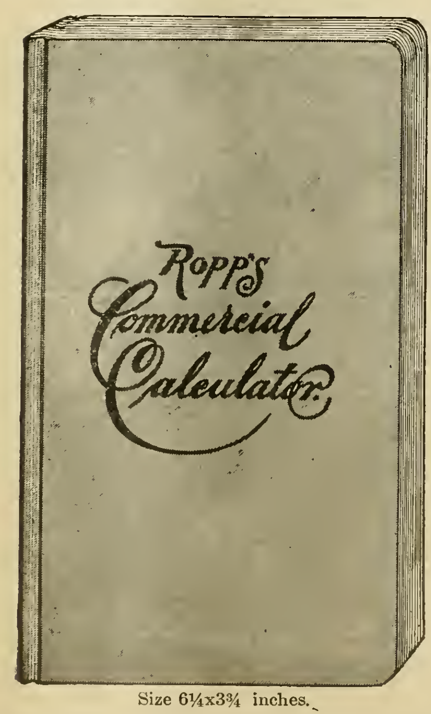

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The **only correct** Rule and Table for estimating the **exact contents** of logs of all sizes.

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The **exact interest** on any sum, for any time, at any practical rate per cent.

The **Day of the Week**, for any date in 300 years, besides hundreds of other very useful things.

It gives all the **Latest** and **Shortest** methods known, besides many published for the **first time**; viz: An Easy and **Unerring** process for "Adding Long Columns; "**Short Cuts** in Multiplication and Division. Problems in Fractions, Interest, Percentage, Mensuration, etc., are usually solved with less than **one-third** the figures and labor required by ordinary methods.

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SECTIONS

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W. T. Falconer Manfg. Co.

JAMESTOWN, NEW YORK

DANZENBAKER PRIZES

It is to be regretted that so many bee-keepers are satisfied to produce year after year a very ordinary grade of honey as regards its appearance, when by a little more care, and having more suitable fixtures, and by taking the honey from the hive at just the right time, a much larger percentage of "fancy" or "extra fancy" honey could be produced, which would sell at a much higher price. The experience of honey-merchants generally is that there is no difficulty in disposing of large stocks of fancy or extra fancy, even when the market is dull. It is the inferior grades that suffer most at these times. We believe, too, that bee-keepers would be very much better satisfied with their season's work if their best efforts were made to produce a really fine product. To increase further the interest in extra fancy honey, the following prizes are offered for honey produced in Danzenbaker hives during the year 1907, under the following conditions:

FIRST.—As above stated the honey must be produced in a Danzenbaker hive, either the present style or any Danzenbaker hive that has been put out within the last few years. These hives may be had of any dealer in bee-keepers' supplies in any part of the country.

SECOND.—For Classes 1 and 2 we require a shipment of approximately the amount stated, to be made by the bee-keeper direct to us at Medina. After the prizes have been awarded the honey entered for competition in Class 1 or 2 will be held subject to the instructions of the producer. We will sell it at a five per cent commission or we will ship it to any point direct by freight or express. There being good honey markets in our immediate vicinity as Columbus, Cincinnati, Cleveland, Buffalo, and Pittsburg, it can be disposed of without difficulty at good market prices, and the shipper will not have to lose a good market by shipping it here. Neither the honey awarded a prize nor that which obtained no prize is to be our property, but will be sold subject to the instructions of the producer who sends it to us. We are interested only in inspecting it to award the prizes.

THIRD.—For all honey submitted for prizes we must have a definite statement from the producer regarding the conditions under which it was produced, whether a light or heavy flow of honey, how the colony was handled, how many colonies in the yard, from what source produced, etc.

FOURTH.—For Classes 3, 4, and 5, we must, in addition to the above report have the signature of two witnesses certifying to the correctness of the report. If the party who sends us the report for the competition is well known to us we shall not require these witnesses. References may be given instead of the signature of witnesses if desired. All parties intending to compete for these prizes should send for blanks which we will furnish, on which the report may be made out.

FIFTH.—It will be noticed in the last three classes, three to five inclusive, that it is not at all necessary to send us the honey—all we require is a report.

SIXTH.—We reserve the right to limit the number of awards in each class, or to make no awards in a class if there are no satisfactory entries for the same.

SEVENTH.—No contestant will be awarded more than one prize in each class, but may make two entries if desired—one in Class 1 or 2, and another in Class 3, 4, or 5.

The classifications for the prizes are as follows:

Class 1.—For best shipment of 200 lbs. of comb honey in Danzenbaker hive.
Class 2.—For best case of comb honey in Danzenbaker sections.
Class 3.—For best report of yield from single colony in Dazenbaker hive.
Class 4.—For best report of yield from five colonies in Danzenbaker hives.
Class 5.—For best report of general results from use of Danzenbaker hive.

For each class there will be ten prizes as follows:

First.—$10.00.
Second.—$7.00.
Third.—$5.00.
Fourth.—$2.00.
Fifth to Tenth.—$1.00 each.

Five Classes.
Ten Prizes for each Class.
Fifty Prizes in all.

This is the time to decide to enter this competition. No matter where you live, whether in the United States or elsewhere, you can certainly find one class in which you can make an entry; and as there are ten prizes in each class we believe that no one will be greatly disappointed in the results unless it is ourselves, and we hope that we shall not be, but see a large number of entries. Even if you fail to get a prize, you will doubtless have increased the value of your own product by your efforts to produce some big results or an extra quality of honey.

The A. I. ROOT CO., Medina, Ohio

The American Bee-Keeper

March
1907

Fort Pierce, Fla., – Falconer, N.Y.

BEE HIVES
SECTIONS

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That is used by bee-keepers can be procured of us as cheaply as anywhere, and we know OUR GOODS ARE SUPERIOR, both in material and workmanship, to those of any competitor. ONE TRIAL WILL CONVINCE YOU. That's all we ask. You will never buy of anyone else.

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JAMESTOWN, NEW YORK

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FALCONER, NEW YORK

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June 7

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Farm and Real Estate

JOURNAL

TRAER, Tama County, IOWA.

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HAS MADE ALL THE IMPROVEMENTS IN

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Smoke Engine, 4 inch stove, none too large, sent postpaid	$1.50
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2-inch	.70
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FAREWELL, MICH.

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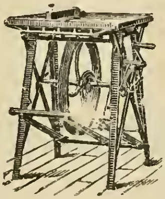

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To a New Subscriber

THE

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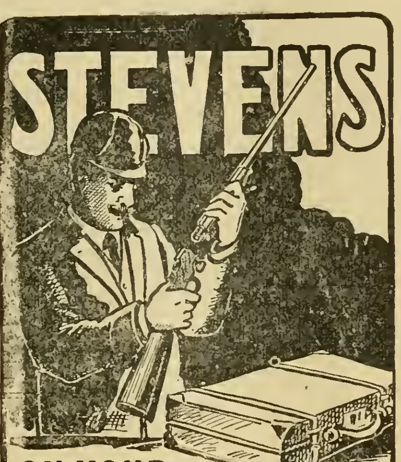

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THE AMERICAN BEE-KEEPER

Entered at the Postoffice, Fort Pierce, Fla., as second-class mail matter.

Vol. XVII. MARCH, 1907. No. 3.

FREIGHT RATES ON HONEY.

A New York Producer Who Declines Mr. Muth's View of the Matter.

F. GREINER.

IN HIS ARTICLE in February issue of the A. B. K. Mr. Muth accuses the bee-keepers of causing the extortionate freight rates on honey themselves.

I do not believe that the eastern honey producer complains or has any reason to complain that the rates he pays on honey are high. I am located in the western portion of New York State and I can ship to any of the large cities in the East at thirty-five cents per hundred pounds.

I do not pretend to know what the Colorado or Texas people have to pay to reach the same markets, but I should say that they ought to pay nearly in proportion to the distance. Perhaps that would be prohibitory for them, but it does not seem to me that it would be just and fair to the Easterner if they could ship at the same price that we do here. They can produce a great deal cheaper by reason of the better pasturage, cheaper lands, cheaper lumber, etc., and they can well afford to pay the railroads a little more than we do in the East.

So far as I can see, the injuries that comb honey shipments receive sometimes cannot influence the freight rate one way or the other, for the shipper stands the "racket." It can be only in very extreme cases that railroads pay any damages. I have never had a single such case adjusted in upwards of thirty years, and only one case where damage was actually paid has come to my knowledge in all this time. It is my opinion that the railroad employees ought to handle comb honey with greater care than they do, and that the railroads ought to pay damages in many cases when they do not. On the other hand, if we do ship frail honey and it breaks down in transit, we ought to stand the loss, and always have to. So why should there be reason for a high rate on honey when it matters absolutely nothing to the railroad whether they carry honey or potatoes. The fact is, the rates here are the same as we pay on apples or other fruit; and if we can afford to pay the freight on cheap fruit we certainly ought to be able to pay the little daub on the honey. I don't kick on the freight of honey, if I do on the freight of my apples. All I find fault with is the carelessness of the freightmen and perhaps also the truckmen.

Honey is naturally of a frail nature. It cannot be otherwise; if it was not, the race of comb honey-eaters would soon be extinct, and the more tampering we do to produce something tough and unnatural the more we hasten that day. Those who have not the skill to produce comb honey without the use of full sheets of comb foundation ought to produce the article in extracted form.

Comb honey is in esteem on account of its friability, the tenderness of the comb, etc., and it would not bring even the present price, if there were not some conscientious bee-keepers left, who do produce a good article, and purchasers think they are getting such. Because they are often disappointed in obtaining good comb honey is the reason our product meets with a slow sale and is pronounced manufactured. The bee-keepers who cannot and do not produce comb honey without the use of full sheets of foundation ought to be compelled to stamp each and every section with, "This honey is built on comb foundation." It would be only fair to the other fellow.

Bottom starters, as Mr. Muth claims, have nothing whatever to do with freight rates, and it is too bad that such an assertion should be made in our press. If we should use cast-iron comb foundation, it would not insure safe transit.

The people who are manufacturing cereal foods, dealers in sugar or other similar products have the advantage in producing an article which cannot be injured, if it is put up in a strong outside box; but it would not help any to put comb honey into a receptacle made of two-inch oak plank. There is a wide difference between honey and dry sugar when it comes to shipping it. One must be handled with utmost care, the other may be slatted about in any way.

We as bee-keepers ought to produce, in the first place, a faultless article. This must be the aim above all; and we cannot produce it with comb foundation. If certain comb foundation manufacturers had not and did not continuously advocate the use of the article in section honey, much less would be used; but what can be expected, if those who are looked upon as teachers advocate the use of comb foundation openly and unblushingly, although in the same breath they express their unbounded exhilaration over the pure food law.

Some of these gentlemen excuse the use of comb foundation in section honey with the supposed fact that combs built on foundation contain less wax per cubic inch than natural comb. This may be a fact; but wouldn't these gentlemen prefer a good, thick, three-quarters inch beefsteak, tender and juicy, obtainable in a first-class restaurant, to the fried up sole-leather (only one-quarter inch thick) of the cheap affair?

All we can do about insuring our honey against breakage in transit is to ship but well built-out sections, and put them up in proper shape. In so far I agree with Mr. Muth. But when such honey does not reach its destination uninjured then the railroads and the truckmen are to blame, and in reality there is where the blame lies.

Naples, N. Y.

You can no more filter your mind into purity than you can compress it into calmness; you must keep it pure if you would have it pure, and throw no stones into it if you would have it quiet.—Ruskin.

BIOGRAPHICAL.

Four Veteran Bee-Keepers of Massachusetts.

JOSEPH S. CHASE, NO. 1.

Walden, Middlesex County, Mass.

BORN IN LYNN, April 19, 1826. Mr. Chase is still as keen and alert in business, and even more interested in bees, if possible, than fifty years ago.

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AMERICAN BEE-KEEPER

MASSACHUSETTS VETERANS.

His youth was spent in Lynn and Salem, but while still a young man he moved to Manchester-by-the-sea, where, in 1853, he bought two colonies of bees and ever since has given a part of his busy life to their care and study.

Only three years later we find him taking the first premium on bees and honey, given by the Essex county Agricultural Society.

This honey was in a large glass globe, placed there by the bees, and made a most attractive exhibit; but as it proved difficult to sell in that shape, Mr. Chase prepared some one and two-pound boxes which sold readily the next season, that of 1857, and were warmly approved by the Boston wholesale dealers.

In 1858 the Essex county Agricultural Society again gave him first premium, and I think, still again in 1862.

In 1868 he bought some rough hill and pasture land in Malden and by skill and energy developed there the large nurseries the products of which have become a standard of excellence in New England. This is not the place to speak of this part of Mr. Chase's busy life, but the thousands of visitors to the Mt. Vernon nurseries testify to their attractiveness and popularity. A son is associated with Mr. Chase in the management of the extensive business.

In correspondence with this venerable expert a most interesting fact was brought to light that should be remembered the next time the old ghost story of "Bees injuring grapes" appears in the newspapers. I call it a ghost story because it died the death of Ananias long ago but is annually dug up.

When it had become the regular thing for Mr. Chase to capture the highest awards on grapes given by the Massachusetts Horticultural Society in Boston his competitors finding themselves badly beaten every returning season and knowing he had no natural advantage either of location or stock, sent one of their number to ask how it was done. The agent was courteously told the nature of the soil and other details, "but" said the keen old bee-master "I did not tell him that I kept four large colonies of bees among the vines to perfect the fruit of the different varieties, and assist in propolizing the blossoms!"

To the bees he attributes much of his success, not only in grapes, but many other fruits and plants, a most interesting account of which lies on my desk, but space does not permit insertion here.

Geo. W. Adams.

Biographies of each of the gentlemen comprising this interesting group will appear in successive issues of The Bee-Keeper.—Editors.

In all evils which admit a remedy, impatience should be avoided, because it wastes that time and attention in complaint which, if properly applied, might remove the cause.—Johnson.

HOME OF F. H. DRAKE.

Mr. F. H. Drake, a view of whose home we present herewith, is the vice-president of the Worcester county (Mass.) B. K. A., by profession a farmer and by training and inclination a most excellent one. Together with his father he conducts an extensive farm in East Brookfield, Mass. and its appearance bespeaks its success. As a bee-keeper Mr. Drake is progressive, thorough and neat.

The little legend, "Eat Drake's Honey," shown on the end of one of the buildings is a bit of Drake's waggery, having been put on the picture by him, for let me assure you that he would never deface his buildings thus. For dry wit Drake is famous and is the terror of his cronies; why, he is so dry that he gives you a chronic thirst—and then shows you the well. And it is a wonder that is not dry also. (M).

SEASONS AND RESULTS IN MISSISSIPPI.

DR. O. M. BLANTON.

MISSISSIPPI has seen in this locality a remarkably mild winter. On January 10th clover commenced blooming followed with maple, elm and mustard; the thermometer rising often to 70 degrees.

I examined my bees on the 16th and found them in excellent condition gathering pollen and honey rapidly. Some of the uncapped cells two-thirds full of honey; showing that when bringing in pollen so soon, they are also gathering honey.

From 240 colonies spring count in 1906, I extracted 14,000 pounds of honey, averaging 5 1-2 gallons to the colony. Early in the spring the commons were covered with white clover, thanks to the city council, prohibiting stock to run at large within the city limits. If I could have had a full range in every direction, I would have made a far greater yield.

On the south is located the city of Greenville where there was no range after the 1st of June. On the west is the Mississippi river which reduces my range to a little more than half.

In this country there is a great difference in location. Mr. Thos. Worthington, of Leota 30 miles below Greenville has on his west front a sandbar of 6,000 acres grown up in different kinds of young forest trees and vines and in his rear and north and south plantations intersected with lagoons and sloughs lined with small growth of timber and vines, with the fields cultivated in corn and cotton. He extracted 19,800 pounds with 160 colonies averaging 10 1-4 gallons to colony.

EAT
DRAKE
HONEY
AMERICAN BEE-KEEPER

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HOME OF F. H. DRAKE.

When there is a great honey flow, the main consideration is in taking the honey as fast as the bees bring it; and not let them get ahead of you. Give them room and they will rapidly bring the honey and be too busy to swarm, which would be a great loss of gatherers.

This winter presages a great yield, like that one of twenty years ago, when the winter was very mild and blooms occurred from first of January until late in November. That year I gathered fourteen gallons to the hive from two hundred colonies, spring count.

Several years ago an amateur bee-keeper, (more properly, "crank") near me had 30 colonies. I said to him in August: "How much honey have you taken off?" "Oh," he remarked, "I am letting them fill up so as to be strong next year." His partner who furnished the money compelled him next year to sell the apiary at $3.50 per hive, the purchaser having the surplus honey of previous year.

I have many old Langstroth hives given me by cotton planters, who attempted bee-keeping and left the business to their negroes and made a complete failure. It requires your undivided study and close application, love of your occupation and devotion to it, to succeed. I extracted to the

10th of October removing from two to three combs of honey from strongest colonies and then had more than enough to winter them. I found that my greatest loss was from hives too full, causing the bees to cluster on combs of honey and thereby chilled to death. Greenville, Miss.

RACES AND STRAINS.

As Affecting Swarming Propensities in the Production of Comb Honey.

J. J. WILDER.

SO LONG as location has any thing to do with this subject, and it surely has, nonswarming indifferences will arise, and each bee-keeper will, to some extent, have to solve the problem in his own location and the method that will give the best results in most locations is the one that is likely to be adopted.

This is a very important subject, and one there is much inquiry concerning, and it can not be hoped that bee-keeping in the south will ever be what it should be or developed to a livelihood or money-making industry until this subject is studied and applied.

It will bring about a deeper study of the needs of the honey bee, and how to supply them.

We have grown into the above subject, bringing our bees up to the nonswarming point, and the results have been so good from season to season that I will explain how we obtained them but I wish first to say something of our honey flow here, as it may help others in other locations who have similar flows. We have three flows; two in early spring and one in summer. The latter is long in duration and there is no trouble with swarming, while the surplus is about twenty pounds per colony.

The first flow is in April, and the surplus per day is about one and one-half pounds. The second flow comes on about the time the first is going off or about May 1st with about two pounds per day, and about 30 pounds surplus. In its duration we were not troubled much with swarming.

When we desired to spread our bee-business and had only black or German bees in the apiary, each hive cast a large swarm every two years and by selecting the colony which gave the best results in honey-gathering and less inclined to swarm, each season, as a breeding colony, we lessened swarming considerably, and results grew better each season.

Finally we cleared our apiary of drone comb, giving each colony eight frames of worker comb, and giving the queens access to as many of them as possible so that by the time the main flow comes on the hives are full of bees and brood, and contain but little honey. If there is much honey present around the brood nest they may swarm as soon as the first flow comes on.

A few days in advance of the flow two supers are put on, the sections well filled with foundation and the bottom super containing four or six sections with the comb over half completed in them. Work in this super is under full headway by the time the first flow is going off, then the second flow comes on and continues the work in the supers. The bees are not molested during the honey flows and the apiaries are not visited more than three times during the flows and the object of these visits is to give additional supers to the strongest colonies if they need them.

At the end of the second flow the supers are removed and there is but few unfinished sections, for the bees will nearly always finish what sections they start in the top supers while if during the flows the supers are exchanged there is likely to be many unfinished sections and the bees molested and the work in the supers to some extent has been checked.

A few years ago we bought some Italian queens, introduced them and tried those colonies for comb honey treating them as we did the German bees, but failed. They would swarm and but little work was done in the supers. They were poor comb builders and did not cap the honey nicely. Therefore, they did not give us satisfactory work in the comb honey supers.

We hold no prejudice against the Italian bees. We like them and keep them in their purity, but only in our extracting apiaries; but when the stock runs back to blacks we have always found them a poor strain of bees, furious fighters and poor honey gatherers, and this may account for some of the abuse the black bees get.

AMERICAN BEE KEEPER

FIELD MEETING OF MASSACHUSETTS SOCIETY OF BEE-KEEPERS,
Home of Geo. W. Adams, Byfield, Mass., Summer of 1906.

In the production of a fancy article of comb honey the German bees have no equal, and it is the writer's opinion that if we ever have a nonswarming strain of bees we will have to go back to the pure German stock to get it.

Cordele, Ga.

THE EAGERLY INDUSTRIOUS BEE.

ALLEN LATHAM.

As SPACE in the columns of the American Bee-Keeper is too valuable to devote to a full discussion of the question in dispute between Mr. Miller and myself, much as that might be desired and important as it is to leave nothing unsaid that favors the bee, I must go immediately to the centre of my side of the question. I will therefore leave Mr. Miller's latest arguments unrefuted, letting them be accepted or rejected as the reader sees fit, and will offer at once the facts which prove the bee to be eagerly industrious.

Let us take our stand by a hive some morning at a season when the fields are favoring bee-life and watch the bees as they go out to their work. Can any one see them issuing eagerly, and hear the sharp "zip," "zip," as they leave the hive, without admiring their active ways?

Follow them to the fields. Watch this one gathering pollen, see how she runs about over the blossom, how she hovers while she skilfully rolls the pollen into masses which she deftly places in her baskets. Again, watch that one sipping nectar, and note her eagerness as she thrusts her tongue into this and into that corolla—and can scarcely hold back her little body so eager is it to get to the next blossom. Watch closely, else you will fail to see her as she flits from flower to flower. Lazy beings do not work that way.

Go back to the hive. See that line of bees fanning the entrance. Now patiently wait till you see a bee stop that monotonous work. I'll warrant that you get tired of watching before she gets tired of the work. Is she lazy? The test of laziness is the monotonous and never-ending task, for he who can keep steadily at work on such a task is industrious.

Thus it is with every function of the bee-hive. No matter what she is doing, the little bee is eager and active at it. If well she never shirks nor is slow, but rather does she carry her work on till utter weariness calls a halt.

Take note of the work during a heavy honey-flow. Get out early to see the start. Then all day long the inpouring stream of nectar-loads continues, the weary burden carriers often falling at the very portals of their home—exhausted. Yet they rest but a moment, and rapidly crawling into the hive they soon reappear eager to repeat the performance. All day thus, from nine till ten—till the noon hour—through the long mid-day hours—till five and yet they stop not. At six they are still eagerly hurrying, though every bit of comb is glistening with fragrant honey, and every home-bee is oozing sweetness, while the air is heavy with the moist incense. Seven o'clock comes but not till darkness creeps over the earth does the work stop, and even then by getting the hive between you and the western sky you will see many weary bees straggling home from the nectar-loaded flowers.

One most striking illustration of activity on the part of an individual bee, for the reader will remember that it is the individual bee that Mr. Miller has insulted, will I offer as an instance of positive proof that the bee is eagerly industrious. The case is by no means an isolated one, but one not to be seen except occasionally.

There were thrown out from a hive late one afternoon and early evening a hundred or more dead and dying bodies of some stranger bees. They lay in front of the hive, scattered over a space of two or three square feet some having crawled before dying not less than two feet from the hive. The following morning while standing by the hive I saw a bee tugging at a dead worker on the ground. She pulled this way and that, and finally, by a great effort, mounted with her burden and disappeared in the distant air. I naturally thought that she had but just brought the dead bee from the hive, but in less than a minute back she came and hovered about the ground as if in search of something. Then alighting by another dead body she grasped and pulled at that, and flew away with it. Again and again I saw her repeat this act, never once entering the hive, never once seeking the society of her living sisters, but plodding away by herself clearing the ground in front of the hive of the dead bodies. Later on another bee joined in the task, and a few hours later when I took note of the progress of the work I found the ground completely cleared of the dead bees that had been thrown there the evening before.

The task was a self-imposed task. An amount of work was done which relatively would be beyond the possibilities of the strongest human being. It would only be fair to say that to do a proportionate amount of work a man would need to carry fifty bodies of his fellow men to the top of a high hill in a space of three hours. This bee is what Mr. Miller has styled the personification of laziness.

Had Mr. Miller said that the bee could be the personification of idleness when there was nothing for her to do, I could agree with him. Doubtless the average bee has to be idle more than she works, some resting weeks and months through the idle season.

FIRST PREMIUM
A.B.K.

10 PREMIUMS WON BY MR. E. F. ATWATER, FOR APIARIAN PRODUCTS, AT IDAHO EXPOSITIONS.

The secret of success is not just as Mr. Miller puts it in his last brief paragraph, but rather as follows: Make you colonies big, as big as you can WHEN THEY HAVE WORK TO DO, but let them be smaller or medium when IDLENESS IS FORCED UPON THEM. Study your flora and know the times that colonies need to be big, and then plan to have them big at those times so that every eagerly industrious bee will have full opportunity to do her best.

Norwich, Conn.

ITALIAN BEES.

I have tried these bees now for about five years, and they have been to me a long sorrow. My charge against them is that if there is a stop, or shortage, in the honey flow for a time they straightway begin to seal the half-filled sections, so if there is an improvement in the weather they are helpless. In this way, two years ago, I had a lot of miserable half-filled and sealed sections. The blacks never do this. During the present year two healthy and crowded Italian stocks idled away the season in an unaccountable fashion, and so in my case it shall be exit Italians!—Cor. B. B. Journal.

THE MINNESOTA ASSOCIATION.

The Minnesota Bee-Keepers' Association, which was founded in 1888, has made a new departure this year by incorporating, with a membership of fifty-one, under the educational laws of the State of Minnesota.

By the acceptance of its three delegates to the meeting last month of the Minnesota State Agricultural Society, it is recognized as the State Association.

With its new lease of life it has adopted a new constitution and by-laws, its objects now being the promotion of scientific bee culture and of the general interest of the bee-keepers of the State of Minnesota To assist the State authorities in the enforcement of laws against the adulteration of honey and for the stamping out of foul brood and to co-operate with the National Bee-Keepers' Association in the defence of its members in their lawful rights.

Article VII reads:

Any member shall have the right to vote by proxy on any subject and at any general meeting, provided that no member present shall vote more than two proxies.

The Association is affilliated with the National Bee-Keepers' Association, so that by payment of $1 annually a bee-keeper may become a member of both associations.

Besides its annual meeting in December, it will in future hold a spring meeting, and another during the Minnesota State Fair week, and the proceedings of each meeting will be published by circular to the members.

In future, "Co-operation" will be the watchword of its policy.

Subscriptions should be sent to the secretary, Mr. Chas. Mondeng, 160 Newton Avenue, N. Minneapolis, or to the treasurer, the Rev. J. Ridley, Monticello, Minn.

W. R. Ansell.

TOTAL VALUE OF HONEY IMPORTED INTO THE UNITED KINGDOM.

For the Year 1906.

		£
January	value	1,532
February	"	2,692
March	"	3,106
April	"	2,965
May	"	6,028
June	"	5,213
July	"	3,821
August	"	2,106
September	"	1,112
October	"	3,215
November	"	1,320
December	"	787
Total		33,897

The total value of imports for the year 1905 was £34,763.—British Bee Journal.

REASONING FROM ANALOGY.

C. W. DAYTON.

I THINK it was Goethe who said, "From the thorough understanding of the visible we are enabled to acquire a knowledge of the invisible," or words which mean the same.

Yes, an inspector can be removed from office and a worse man instated. But who is there who has the time to spare to follow up and inquire into their methods. It takes an expert to discern faults in methods of doing business besides experience in detecting or uncovering. Dishonest acts generally have to be literally "dug out" with very little outside cropping to show where the faults are buried. It is a greater job than the inspecting itself, and then they can easily be "more than honest" when they discover a "hound" examining their tracks.

I have traced reporters and reporting editors for hundreds of miles, yes, I may say, thousands of miles, mainly for self improvement, or, in fact, to learn to "report," and I found their reporting to be woefully exaggerated and often pure fabrication. Even the most believable things, which would ordinarily be supposed that they could not be improved by exaggeration, were turned into the most unbelievable. Unbelievable, not because it was an ordinary story enlarged, but as often because it was a really small affair enlarged into a size where it became notable. In the first place, the persons who report have their own idea of the business they are engaged in reporting; an idea of what it ought to be or might be, perhaps under strained or imaginary conditions. They may be persons who can afford or who do afford any thing their hearts or habits desire and when their wish is made known there is a movement to suit their utmost desire. Cost in money or labor may not figure, or, be figured. But the real success of nearly all kinds of businesses depends upon just such figuring. Without practice in this kind of figuring we are sure to become incapable. This "figuring," or contriving is the shaping of the disposition to fit or dovetail with the conditions as they exist or are found in nature.

Our natures are artificial and are constantly endeavoring to vary from the laws and methods of nature, and it is necessary to keep close to and observe closely daily and hourly of nature's methods; otherwise nature will have to become shapen to agree with our notions of what nature ought to be. If we do not delve our hands into the soil or bee hives every day our understanding will begin to slacken or grow out of force. And force is regulated a great deal by necessity. Necessity by need of the results of the delving—the labor—the careful, painstaking labor. Labor which brings the means for our livelihood.

It requires the skill of the fingers with its accompanying anxiety, the appreciable results and the satisfying of genuine hunger wrought by labor; nothing "make-believe." Not boastful, nor puffed up, but doubtful—wishful.

No, reporters nor editors are not and never can be reporters and it is only the foolish or the fooled who think so. As soon as the bee keeper has reached the point where he is independent, or beyond restraint the quality of his knowledge begins to deteriorate. There may be more in quantity but it is more machine-like. It lacks the flavor of "home-cooking," or to be more exact I may say careful in the preparation—not to use any imperfect ingredients—none which are stale, or over ripe nor under ripe—selected with judgment.

If it is honey it should be the properly ripened kind—the properly stored kind. Not accept it because it is called or supposed to be honey, or to relieve some one's pocket book or suit someone's favor. It must be the honey which is good for the digestion and has the genuine essence of the bees, bee hives and wax.

If honey lacks the essence of the bees it is not honey—merely syrup—nectar syrup, no matter how long it has been ripened artificially. Flavor or taste is one of the greatest aids there is to perfect digestion. Digestion is the foundation of health. Flavor is an additional ingredient—a material entity the lack of which renders honey imperfect.

Flavor creates smell or scent. Scent can create an appetite for food where there was no appetite before. This appetite or scent of food excites a generous secretion of saliva and also a movement and activity of the muscles of the stomach. These activities are increased and aroused to activity. Then when the food is received into the mouth there will have already been made preparations for its being taken care of and for its perfect disposal. By far the larger share of the undigested food and the gulping after meals is caused by the improper condition of the first mouthfuls of food swallowed. Being chewed and swallowed before the salivary glands or stomach muscles became active. No muscle or other organ of the system works to the highest extent until it has been in activity for some space of time.

Whether it is honey or brains those articles are not to be found except in close contact with nature or her methods or plans. No artificial flavorings or scents can be devised which can exactly "fill the bill." Any variation from the "real" will begin an artificial and morbidness of appetite and scent that can lead no where else than astray. Then the body will begin to fail in obtaining its proper nourishment and there begins to be a change which gradually grows and extends until the bodily machinery cannot be kept in running order. Not so much on account of improper food as of improper smell or scent. This morbid scent and appetite are of a most deceptive nature. It makes the possessor think that he has the most active and healthy appetite he ever had. But it is nearly all stimulant fraud. Undigested food ferments. Fermentation produces alcohol and germs. Organisms, both animal and vegetable which destroy the linings of the digestive tract and render them sore and painful, which painfulness is readily mistaken for natural hunger.

Clatsworth, California.

A PLEASING DEMONSTRATION.

The Michigan State Bee-Keepers' Association held their annual convention at Big Rapids, Dec. 25 and 26. Mr. Fred W. Muth, of Cincinnati, was present and reports "a fine time."

The following is a paragraph from a letter to The Bee-Keeper:

At their city hall in the evening of the 26th, close of the meeting, Mr. Elmore Hunt gave a public exhibition of handling bees in a cage. The mercury in the open air had fallen down to the freezing point, but the hall was warm, and our friend Hunt went through the performance like a professional actor—wonderfully well. He went into the cage, and while speaking to his audience, doffed his coat, next his cuffs and collar, and his hat. Then rolled up his sleeves, lit his smoker, and proceeded with the operation. He took out one frame after another, accompanying every move with a thorough explanation, and showed what the little bees can and will do. Shook them into a dish pan handling them as though they were so many little grains of pop corn, newly popped. It was a revelation, even to me. When the bees stung Mr. Hunt, he displayed a nerve, leading one to believe that it did not pain him in the least, but I knew, from experience, that he could control the external signs of pain wonderfully well.

QUEENS THAT FAILED.

Dr. Blanton writes:

I had two queens hatched in June, one a three-banded and one a Cyprian that in ten-framed one-story L. hives did not gather any surplus honey and I gave them two extra combs of honey each to winter on.

They raised a moderate quantity of brood. I examined them a few days ago and finer queens I would not wish to have. Will give them a fair trial this season and if a failure will replace them. The cause of failure is a mystery to me, as both were young.

THE BEE-KEEPING WORLD

Staff Contributors: F. Greiner, Adrian Getaz

Contributions to this department are solicited from all quarters of the earth

GERMANY.

The marking of a queen with paint, as is practiced by some bee-keepers in Germany, has developed the fact that sometimes a prime swarm issues with a virgin, while the first after swarm may be led out by the old queen.

The same paper also says, that a virgin queen will always be accepted as soon as an old mother is removed, providing the bees are first brushed or shaken into an empty hive. When bees are filled with honey and placed in the state of embarrassment, as they will be when deprived of all their combs, they are in a mood to accept anything in the shape of a queen, or they may be united with other bees.

The odor of lilac, nettle, wormwood and onion is objectionable to the bees, says the Schw-Bztg. These vegetables may therefore be used to good advantage to repel bees. For instance, when bees insist on clustering in certain places where we do not wish them to, or in case of robbing, etc.

It appears to the writer, that some German bee-keepers habitually deny that anything good can come from America. After some ironical remarks Gunther says in die Biene: "At the great German and Austrian B. K. meeting in Leoben I asked an exhibitor of American queen rearing supplies, there present, as to the merits of queens produced by them and learned that such queens only last one year and that he himself raised the queens for his own use by the natural process."

On the other hand, the writer has observed that some of these very writers make a practice of using post constructed queen cells year in and year out, and say their bees do not deteriorate.

EXTRACTING THICK HONEY.

Heather-honey is of such a heavy body and has such other properties that it has been considered impracticable to extract it from the combs without breaking them. Of late a method has been devised which overcomes the difficulty. By means of a kind of steel brush, which is kept in hot water when not in use, the midrib is pierced, the honey is warmed and perhaps broken (not the comb) by pushing the hot metal pins into it after uncapping. The combs are then at once set into the extractor. Enough combs are uncapped first to fill the extractor, and two of the "spike-brushes" are needed to facilitate the work. One is always in the boiling water while the other is being used, and they are frequently exchanged. (The writer has had to do with honey of a similar nature. It would not come out of the cells and seemed to be gummy. It was not of the best color, or somewhat between clover and buckwheat).—Schlesw. Holst. Bztg.

KEEPING A RECORD.

A note book is a very important affair in a modern apiary, says W. in Lehrmeister in Gart. und Kleinthf. He who does not regularly use one, better begin at once. Each hive should have its number and is correspondingly entered in the book. Correct record should be kept in regard to the queen, her age, her ancestry, etc. All manipulations should be recorded and the amount of honey taken noted. Abbreviations should be used as much as is practical.

HONEY AS CHICKEN-FEED.

The Rucher Belge says honey is good for hens. Six parts honey, three parts buckwheat flour, one part sifted wood ashes; this mixture is said to be good to promote egg production, gives the plumage a shiny appearance and is conducive to their health in general.

The bee-keepers in and around Kiel keep on an average about 15 colonies. About one-third of the colonies are in box hives, the rest in movable-comb hives. The average net result was 21 pounds of honey per hive.—Schlesw. Holst. Bztg.

The idea of constructing a honey extractor that would empty both sides of a comb at one time is not a new one. It has been propounded in our apicultural press a number of times and it has been admitted that the principle is all right.

January number of Deutsche Bzcht. has an illustration, reproduced herewith, of a home-made extractor of this kind having a capacity of 100 pounds per hour. This mode of forcing the honey out of the comb does not injure it as sometimes does the mode employed in the standard machines.

TRUE. THE WORLD OVER.

Neumann, in Leipz. Bztg, says: Selfishness is a human trait. Sometimes a person will join a bee-keepers' society, become a prominent member and then try to use his influence for selfish ends. When he is shown up he will not meekly step down and out of the way, but get some agents to do his bidding, therefore bee-keepers' societies should be careful whom they admit to membership and in whom they place their confidence, for such people as try to advance their own interest under the cover of advancing apiculture and being a help to the bee-keeping world in general, are anything but a blessing.

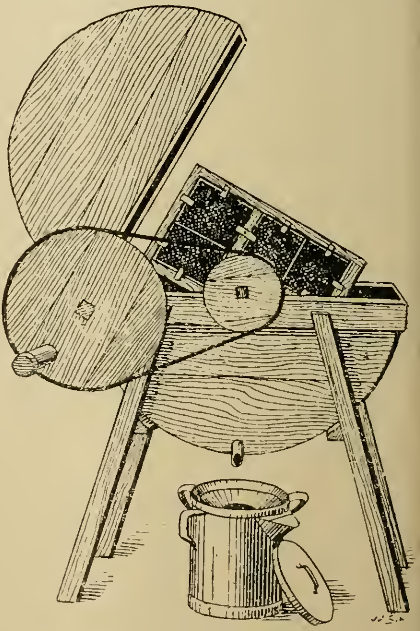

Abb. 10. Gädckeſche Honigſchleuder.

Jungklaus in Deutsche Imk aus Bochmen expresses the same idea in saying "Egotism, the aim to always make money out of your neighbor, and to be at the head of the heap at any cost, has nothing to do with the advancement of apiculture."

Freudenstein estimates, in the Neue Bztg., that annually about 500,000 colonies of bees are brimstoned in Germany. Every one of those colonies might be saved, he says, by feeding them up with sugar even if no combs are at hand. He warns bee-keepers against the purchasing of combs as being a most dangerous practice. The combs may be from foul broody hives and then the disease is carried in them. On the other hand, there is no money in selling combs. They are too valuable to sell. The brimstoning of bees is only practiced by box-hive and straw-hive men, and the practice of canstantly killing off the heaviest colonies has resulted in the poorest race of bees for honey-production.

FOOD OF LARVAL QUEEN AND DRONES.

R. Guenther says, ordinarily the queen and drones are fed by the workers the pre-digested food(chyme) and the fully digested food chyle, but it would be wrong to suppose that either the queen or the drones were unable to subsist on the raw material, honey and pollen. Young queens, in particular, are often seen sipping honey from the cells.

APIARY ON WHEELS DESTROYED.

A house-apiary on wheels is owned by P. Kiemes, of Rievenich. The outfit consists of two wagons, each with fifty-two hives of bees. The owner moves them to different fields, according to the season. The last honeyflow comes from the heather, an herb growing in large quantities on the plains in many parts of Germany and blooming in August and September. The apiary of Mr. Kiemes had just been moved to the Heath by Thalfang when it was broken into by thieves. One of the wagons, bees, honey and all, was burned and the other badly damaged. The loss is estimated to be about $1,000.00.

The Leipz. Bztg. advises the German supply dealers to follow the example set by the American manufacturers, allowing a reduction on prices for early orders.

Dzierzon used to advise not to put the bees into cellars till toward Christmas, but we have found it a safer practice to do so early in November.

TRANSVAAL.

According to the Boer Commander Jooste, bee-keeping is not carried on in the Transvaal on improved lines; in fact, not at all, except as bee-trees are hunted out and the honey taken. In doing this the Boer gets lots of stings; but bees must do well. Jooste says that he found bee trees on his farm that contained honey combs seven feet long.

The Boer is very fond of honey but does not take to whiskey. Saloons are therefore not knowu in Transvaal (Happy land).—Die Biene.

ANCIENT EGYPT.

The knowledge we have of beekeeping in Egypt, as it was some 6000 years ago, has been deducted from the carvings on monuments and Pyramids as well as from finds unearthed in that country. Dr. H. Buttle speaks of this prehistoric bee-knowledge in Centralblatt. It seems that these people knew something about the natural history of the honey bee, which we did not till 5000 years later. They probably knew what the sex of the workers and the queen were. The very names which the queen carried in after times up to within modern times shows that she was considered of masculine gender; while from the hieroglyphics it may be deducted that at those times they regarded the queen as a female.

SWITZERLAND.

Finds that have been made in Switzerland indicate that there was a prehistoric race of people who kept bees and utilized the honey. What is supposed to be a honey strainer made of stone is reproduced in a bee-paper. The implement is kept in the museum at Lausanne, Geneva lake.

The people might have lived about the time the acient Egyptians did, but they lived in a dark age as compared with the latter.

FRANCE.

HANDLING STRAW-HIVES.

(In giving the following, I do not intend to encourage the keeping of straw or box hives of any kind; but the management here described could, in some respects, be applied advantageously to movable-comb hives).

Mr. Denis Havard believes in movable comb hives, at least in theory; but for several reasons has kept the old-fashioned straw hives. They are of cylindrical form; their walls about two inches thick. The inside diameter is about sixteen inches, the height nearly a foot. The top has an opening of about three inches in diameter which can be used when the bees need feeding or when a super is added. The supers used are like the hives proper, except that their height is only about six inches. The hives have two entrances, one at two inches above the floor (bottom-board) the other about six inches high. The supers have also an entrance at about two inches above the lower edge. Supers and hives are provided with cross-sticks, to hold the combs.

The colonies are kept in a "rucher" large enough to hold forty, placed in two rows, one above the other. (A rucher is a bee house or bee shed closed at both ends and back. The front is open and consists of shelves upon which the colonies are placed. One or two doors are provided at one or each end. Mr. Havard's rucher has two).

In many parts of Europe the mountainous, wild regions are covered with heather and other fall-flowers. It is customary to transport the bees there to get the benefit of it. Unfortunately this honey is quite dark, extremely thick, and not good for wintering.

In Mr. Havard's region, the bees can have some flights during the winter. It is only when there is more than two months without fair flying days that some of his colonies suffer from dysentery. But that does not often happen.

As soon as his bees are brought back from the heath region, the heaviest ones—those that may give more than 30 lbs of honey—are taken up. The entire contents are taken for honey and wax, after having driven the bees out and united them with the weakest colonies. To avoid fighting, a few drops of essence of mint are given the day before to the colonies to be united in order to give them the same scent, otherwise there would be considerable fighting. The light colonies are fed for the winter, a mixture of sugar syrup with one-fourth of good honey. The feeding must be all done by the middle of September. The upper entrances are closed and cushions of oat chaff placed on the hives for protection. In very cold weather straw mats, such as are used by gardeners, are placed in front of the hives for further protection.

In March when the weather is sufficiently warm, a general visit and cleaning of bottom boards is done. The upper entrances are opened, and the colonies short of stores fed from two to four pounds of good honey—not more. From now until there is plenty in the field, stimulative feeding is practiced. His bottom-boards are very thick and provided with a kind of trough (something like the Alexander feeder) for that purpose. Every second or third evening a big spoonful of honey is given to each colony. During the last part of April all the colonies sufficiently strong receive a super, partially to retard the swarming. He prefers to have all the swarming done between the 10th and 20th of May.

Let A represent a colony ready to swarm and occupying the stand No. 1. B, a weak colony or one among the weakest of the apiary occupying the stand No. 2. No. 3 and No. 4 are empty stands, thus:

A	B		
No 1	No 2	No 3	No 4

A swarms and gives a swarm, S, which is placed on the old stand, the parent colony is placed on the stand of B and receives the field force of B. B is placed on a new one; say stand No. 3. Then there is:

S	A	B	
No 1	No 2	No 3	No 4

About ten days later, the colony A swarms again. The swarm, a second swarm with a young queen, we can call it SS, is placed on stand No. 2, from which it came. The colony A takes again the place of B, and B is removed further, on to stand No. 4. He finally has

S	SS	A	B
No 1	No 2	No 3	No 4

None of them will ever swarm again that year.

In the middle of June, the heaviest of the old colonies having swarmed, are harvested or taken-up and put in new hives. If necessary two or three are united to obtain strong colonies, for they have to rebuild their combs. The wax is very valuable in Europe. Furthermore, Mr. Havard wants to renew his combs often; every year if possible.

The colonies that have not swarmed or have not been removed from the original stand and are strong enough to swarm, are now swarmed artificially and the swarms lodged in some of the hives with combs, from which the bees have been driven out.

All this must be done by the middle of June. If between then and the middle of July, there is a dearth of nectar, feeding is resorted to, so that the colonies may be strong enough to go to the heath region with advantage at that date.

When they come back, the heaviest colonies may be taken up, but Mr. Havard chooses as far as possible the first swarms and the colonies displaced at swarming times.

That leaves him to go into winter quarters, chiefly with colonies having young queens and new combs. To this and to the spring feeding, he attributes his remarkable success.—L'Abeille et sa Culture.

To those overheated by exercise or sick with the fever, a doctor recommends the following drink: Boiling water one pint, bi-tartrate one-seventh of an ounce, honey three good spoonfuls. Mix and stir well and let cool.—La Gazette Apicole.

LARVAL DEVELOPMENT INFLUENCED BY FOUNDATION.

Some ten years ago, Mr. Boyer (deceased) presented some bees from the province of Burgundy that were notably larger than the ordinary bees. An examination of their combs showed that the cells were larger than those of the common bees. Needless to say that these combs were built entirely by the bees and not on foundation. Some French and Belgian bee-keepers suggested that by making foundation with larger cells, the size of the bees could be increased. Mr. Pincot, at the time, stoutly denied the possibility of any such thing. But lately he found that he was mistaken. When the Italian bees were introduced in France, Germany, etc., the remark was made at once, that they were larger than the blacks. At that time foundation was still unknown or rather very seldom used, and the bees could build their cells whatever size they chose.

To clear up the matter Mr. Pincot ordered from a French queen-breeder who has apiaries both in France and in Italy, a colony of Italians on natural combs. As the box hives are still common in both countries, the queen-breeder (Mr. Bellott) sent him a colony of Italians that had been in a box hive bought in France and in which nearly all the combs had been built by the black bees previous to the introduction of the Italians.

When the bees arrived, Mr. Pincot was quite astonished to find that they were Italian bees sure enough, but of two different sizes, some notably larger and some in less quantity decidedly smaller than the ordinary black bees. A small piece of recently constructed comb had cells rather larger than usual, while the old combs had cells smaller. Evidently the first occupants of the hive had been some degenerated undersized black bees and the small Italians had been raised in those cells, while the large ones were those imported from the Italian apiaries.

This gave him four types of bees all of different origin and all of different sizes, and four different sizes of cells. The cells built by the Italians counted (one side only) 382 to the square decimeter. By the Burgundy bees, 399. By the ordinary blacks, 427. By the degenerated blacks, 462. One square decimeter contains very nearly 15 1-2 square inches.

The following spring a Rietsche press specially made was procured making 400 cells to the square decimeter instead of 427 as usually made.

The bees were transferred to a new hive furnished with this foundation (the 400 cells to the square decimeter). Four nuclei were also formed, three of which accepted Italian queens and the fourth raised one of its own, all furnished with the same foundation. The three with Italian queens raised large bees altogether, but the fourth raised a mixture of large and small bees for a time. Eventually though the small bees disappeared entirely.—L'Apiculteur.

SAGGING OF FOUNDATION.

Mr. Pincot has used both the roller and press styles of foundation. The roller product sags under the influence of the heat of the bees. A sheet eight and a half inches sagging one-half inch, or bulges more or less when wired. The foundation made on the Rietsche press will at first shrink slightly when cooling, and after being put in the hive, regains, under the influence of the heat, its original size, that is the size of the press but no more. A sheet eight and one-half inches wide does not stretch more than one-eighth of an inch.—L'Apiculture.

WHAT ARE THE DRONES FOR?

Only to propagate the species is the general verdict. Nevertheless, some insist that they help in keeping the brood warm, thus releasing that many more workers for outside work. Some accuse them of helping to feed the brood. Some discussion on the subject has taken place in the Apiculteur. Among the facts stated, it was said that last spring, about the time of swarming, a very cold spell of weather happened—even some snow in a few localities. Messrs. Tricoire Bros. say that their bees threw out a considerable amount of brood. They thought it was a case of starvation, but inspection revealed that there was plenty of honey in the brood-nests and that the dead brood was that which the bees had been unable to cover sufficiently to keep it from chilling. The strongest colonies had plenty of drones and had their supers on with a little bit of honey in them. To their surprise, they discovered that the drones had left the brood nests and congregated on the honey in the supers. They think that this fact disposes of the theory that the drones help to keep the brood warm. They argue that if it were so, the drones would have remained or would have been allowed to remain in the brood nest to help in protecting the brood against the cold.—L'Apiculteur.

DRONES PIPING (?)

Mr. Bassaler asserts that the piping at swarming times is between the young queens in the cells and the drones that may be near (?).—L'Apiculteur.

SKUNKS MORE PROFITABLE THAN BEES.

Augusta, Me., Jan. 12.—Skunks net an annual revenue to the State of Maine of from $125,000 to $150,000, according to a recent investigation into the skunk-hunting industry. This is double the amount received from the honey industry. Nearly 25,000 gallons of skunk oil are produced in Maine every year, and there is a wide demand for it, owing to the curative properties it is said to have for rheumatism and other ailments. The increasing popularity of the oil has caused the price to advance within a year $1 a gallon, the wholesale price now being $5 a gallon. An average skunk produces one quart of oil.

The fur of this disagreeable, but profitable little animal is also valuable, the price for skins varying with the fashion. The dark skins are the more valuable, a pure black skin being worth from $1 to $2, according to quality. Striped skunk skins bring from 25 to 40 cents, while those with a part stripe bring from 50 to 75 cents. Three years ago the skin of a dark skunk brought from $2.50 to $3, and there were not enough to meet the demand. Since that time, however, the muskrat has supplanted the skin in popular favor and the price went down. Striped skins are dyed and blended to make coats and boas, and the black skins are used for muffs.

The skunk-hunting season lasts from the middle of September until well into November.

Black skunks are becoming more scarce in this State on account of their popularity, but in New York and Pennsylvania there are scientifically conducted skunk farms, where light-colored skunks are kept for breeding purposes and the dark ones killed for their fur.—Newspaper Clipping.

AFFECTIONATE BEES.

A "Windy City" reporter apparently at loss to know what to do ran loose on the following:

Bees at Keeper's Bier.

A most remarkable demonstration that the honey bee has affections occurred at Wall Lake, Ia., when Oliver J. Seer, a pioneer apiarist, died.

It had been his custom to move among the bees without covering his hands or face. The bees followed him about the yard and into his workshop with never an offer to injure him. In the winter when their supply ran low he fed them sugar syrup and rye flower. He covered their hives with blankets to keep them warm.

From the day of his death there was unrest in the colony of bees. On the day of his funeral the bees swarmed about the hearse and thousands followed it to the cemetery. Several swarms of bees deserted their hives and were found in trees in the cemetery near the grave of their former owner.—Chicago Record Herald.

We must not contradict, but instruct him that contradicts us; for a madman is not cured by another running mad also.—Antisthenes.

THE

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DON'T WORRY ABOUT THE STRONG COLONIES.

If your colonies are normal and have a reasonable supply of stores you need not worry if the bees fly on cold but sunny days of winter. Where many bees are flying from a colony on such a day and failing to get back you may be sure that conditions within that colony are abnormal. Bees from strong and healthy colonies often venture out on very cold, sunny days but with the exception of the old bees, who really go forth to die, nearly or quite all may be seen to go back.

Bees in hives covered with black are often so warmed up that they break cluster and spread freely over the combs and down to the entrance, but few will venture to fly, however, and those will take but a short circle and quickly hustle back. Not so with the bees from a cold, damp hive, for many of them when tempted out by the sunshine are too burdened with feces or too weak to fly strongly, hence drop to the ground or snow and never return.

If bees are kept dry and are warmed at intervals by the sun they can and do thrive on all sorts of stores, even to clear "honey-dew." Also, under such conditions, unsealed stores are no danger. (M.)

It looks as if the farmers had been "given a lemon" in the denatured alcohol law. The alcohol can only be denatured with benzine or wood alcohol, two trust controlled products, and the establishment and operation of stills is so hemmed about and restricted that profitable establishment and operation calls for so much capital as to put its manufacture beyond the reach of most farming communities. Already pressure has been brought on Congress by the farmers to have the law broadened and bettered. (M.)

Gleanings in its February 1st issue has the following referring to an Arizona bee-keeper: "Last year he produced and sold $7000. worth of Alfalfa honey, but he had to feed $4,000 worth of sugar, so that with his labor his 2000 colonies did not pay him so much after all." $4000. worth of sugar means upwards of 80,000 pounds which makes over 240,000 pounds of syrup or 120 pounds per colony. Is comment necessary? (M.)

Why should the honest and conscientious honey producers be forced to compete with the sugar syrup "honey" of their unscrupulous brethren? Every state should have a law compelling bee-keepers to color to a dark shade all syrup fed to bees. Upright bee-keepers will welcome such a measure as it will be no hardship to them and will at once disclose sugar syrup honey when it is offered for sale. Those who will protest against such a measure will be found to be the ones who are profiting directly or indirectly by the production of "sugar syrup honey." (M.)

"Nothing venture nothing have," and if you do not venture to experiment with your bees and risk loss with a few colonies you will have to be content with plodding in the old rut, while your more progressive fellows pass you. (M.)

Bee-keepers need not expect any radical change or any rapid improvement in their bees until the cause of the development of the queen is learned and until mating is controlled. (M.)

Our old friend, Dr. O. M. Blanton, Greenville, Miss., on January 25th wrote: "More rains and cloudy weather, and river booming. Have 43 feet on guage. Highest water ever known was 51 feet above low water mark. River on a stand and no fears of overflow."

DR. LYON'S "NOBLE RACE."

The following paragraph, from the pen of F. A. Hooper, Hope, Jamaica, appeared in Gleanings for February 1.

"I have made a thorough test of the Caucasian bees in several localities, and have found them unsuitable for this climate. Being very gentle, the red ants and other pests destroy them; moreover, they are very poor honey-gatherers. At one of my apiaries I had fifty colonies of them, and during the rains I lost nearly all, while the Italians in the same yard all survived."

It's now up to the Rev. D. Everett Lyon to make it plain to Gleanings' readers that, if Mr. Hooper is not insane he certainly knows nothing about bees and that he has never had the real thing in the Caucasian line.

We opine, before the Caucasian experiments are finished in this country Dr. Lyon will begin to realize that, when he undertook to show up as foolish everyone who failed to coincide with his half-hatched theories regarding this "noble race," the task was greater than he surmised. (H.)

THE NATIONAL'S SEAL LABEL.

Last year General Manager France, of the National Association, made an effort to secure a honey label that members could obtain at a reasonable price. A sample of the job was sent to this office without comment, and The Bee-Keeper criticised it rather severely, for it was indeed a most inartistic piece of lithography, and a disgrace to the Association. Mr. France writes that the execution of the work was entrusted to one professing ability in this line, but that the result was probably as disappointing to himself as it was to The Bee-Keeper. Now, however, Mr. France has evolved a new design of seal label that can be used only by members of the Association and presenting a fifty-dollar guarantee of purity if the seal is unbroken. Each member using the

Association label is given an official number, which, with the producer's name and address, appears thereon, and complaint, as to the contents of package, in case of dissatisfaction, is to be made to the general manager of the Association. Black, red, yellow and gold on white ground constitutes the color combination, which is a great improvement on the first effort. (H.)

Mr. W. W. McNeal, Wheelersburg, Ohio, writes that his bees, in winter quarters, were seriously menaced by the recent floods, but that he succeeded in saving all but two colonies.

A JAP'S ESSAY ON ANTS.

Mr. Geo. W. Adams in a recent letter refers to Lafcadio Hearn's essay on "Ants" as follows: "It is written from his Japanese standpoint and I found it not only amusing but provocative of serious thought throughout all its humor. He calls attention to the fact of their (alleged) absolute moral rectitude and that the name in Japanese is "Avi," which most curiously is written in the ideograph by combining the sign for "insect" with that of "moral rectitude," so the written name translates literally "propriety insect," or, as our aboriginal forerunners would say, "creature that always does right!" Close observers those old people of the East.

We commend a perusal of the essay to our readers. (M.)

POWER OF INSPECTORS.

The following extracts from a letter recently received well describe the present attitude of no small number of bee-keepers on the subject of laws for the suppression of bee diseases:

"It seems as if the average bee-keeper who is interested in the question of foul brood law looks at the whole thing from the standpoint of the inspector only. The law must give the inspector power, must make the work as easy as possible for him —the bee-keeper may go to—Helena, Mont. I must confess that I was rather indifferent at first, but now that I have made the matter a study I think that such a law is wrong. I think that a law of this nature should be wholly one to regulate, not one to enforce, I mean rather that the law should serve rather than penalize. * * * The interesting fact of all is this, every mother's son of them don't care a rap about the constitution. Gosh, they ought to move to Russia."

The reasons for prevailing conditions are obscure, but certainly the attitude of such persons does not bespeak farsightedness nor that hard-headed common sense with which we as a people consider ourselves endowed. Because the major number of present inspectors are men of integrity and tact it does not follow that such always will be the case. Because the inspectors must have power to enter and examine it does not follow that they will never abuse that power. Because as yet the inspectors rarely do harm it does not follow that they or their successors will never err or be malicious or venal. It is the height of folly to grant the needed powers and then not hold the inspectors responsible for malpractice.

The powers given inspectors are "police powers" but regular police are accountable to higher authorities and their acts are subject to review and such should be the case with inspectors. Probably they could be reached through civil suits but the bee owner should have some more ready and less expensive way of redress. Responsibility will not hinder the honest and conscientious men in the discharge of their duties, but it will be a restraint on the careless or dishonest, and will put a wise and perfectly proper control on inspectors.

Already we hear rumors of some of the inspectors using their office to further the interests of some individuals and concerns. The opportunities for mischief therein are great and should be guarded against by proper restrictions in the laws. Attention has been called to the fact that most of the opposition to any restriction on the powers or freedom of inspectors has come from that portion of the apicultural press which is considered antagonistic to the honey producers, or from persons friendly to the interests behind those papers. If that is correct there must be a reason for it. What is it?

An association of inspectors has been proposed and of it one prominent and influential honey producer writes as follows:

"There is no question but the supply interests will try to manipulate the 'Inspectors Association' if it is possible for them to do so. This is evidenced in their attempt to make it an annex to the Annual Meeting of the National What is it Association." (M.)

INDIANA STATE ASSOCIATION.

The Indiana State Bee-Keepers' Association was organized at the State house, Indianapolis, February 7th, 1907. The officers of the new organization are: President, Mr. Wilson, of Redky; secretary, Mr. Johnson, of Vincennes; treasurer, Walter S. Pouder, of Indianapolis.

Mr. Fred W. Muth, the hustling honey man of Cincinnati, who was present, writes that a foul brood bill, drafted by Mr. Pouder, was endorsed. It is similar to the Ohio law, and it was given a start through house of representatives soon after. Mr. Muth says that the meeting was "fine," and that he was surprised to see so many bee-keepers present.

Success to the Indiana boys! (H.)

Capt. H. H. Robinson, of Cuba, writes that they have been without rain for nearly three months and that everything is parched as a result. Up to February 8th, the crop was short, but bee-keeper-like the boys are yet hopeful. (H.)

OUR COZY CORNER

BY HARRY E. HILL

Photo No. 6 was taken by Mr. F. H. Drake. Copy was finished dull on post card of the developing kind.

No. 7 is printed from a 5x7 plate sent us by Mr. Geo. W. Adams, and was finished by The Bee-Keeper on carbon matte paper. This series of brief biographies to appear in following issues of The Bee-Keeper is very interesting indeed, some of the veterans shown being upwards of ninety years of age. They are: Jos. S. Chase, Jno. T. Gould, Capt. Chas. Knight and Geo. W. Adams.

No. 8 is from a 5x7 negative sent us by Mr. Geo. W. Adams, Byfield Mass., at whose home the picture was taken last summer. Finished on carbon matte paper by the American Bee-Keeper. Photographer unknown.

No. 9 is from a matte paper print hardly any larger than the reproduction, and was sent to us last year by

Mr. Andrews, who is one of the most expert, and a very extensive apiarist.

No. 10 is reproduced from a very glossy 4x5 print, on printing-out paper. Photo by Mr. E. F. Atwater, Meridian, Idaho, the winner of this fine array of prizes. Next month we will show a picture of one of Mr. A's apiaries.

No. 11 is reproduced from rough-surface copy of the developing type, and was taken by Mrs. F. W. Muth. In this picture Mr. Muth is seen with his two daughters, the Misses Martha and Edna, of whom, as may be imagined by a glance at the picture, he is very fond. Mr. Muth is the president and manager of the corporation bearing his name, at 51 Walnut St., Cincinnati, and he is a born honey salesman, having been reared at the business. He is, doubtless, as thoroughly conversant with the honey trade of the United States, and with the various varieties of honeys produced in the different parts of the country, as is any man living. Some three or four years ago he came to Florida expressly to show the editor of The Bee-Keeper what he knew about pugilism, and sought to wipe up the earth with him. This horrible determination was an outgrowth of things said in The Bee-Keeper about dealers who would persist in denominating low grades of extracted or strained honey as "southern." It was all unexpected by the innocent editor, who was aroused from his slumbers at an unseemly hour of the morning by murmering voices outside—voices in which there was perceptible menacing accent. Peeking out into the gray light of early dawn he could see a stalwart and muscular man, evidently much excited and impatient. That was Fred W. Muth, seeking revenge, and awaiting the forthcoming of The Bee-Keeper man. More remarkable than this, however, was the fact that but slightly in the rear stood another man nervously turning on his heel, who actually held the blood-thirsty Muth's Sunday coat. This accomplice proved to be none other than O. O. Poppleton; who, as is well known, had always previously borne a reputation

9 MR. L. L. ANDREWS, CORONA, CALIF., With load of honey cans, ready to start for the apiary in the foot-hills.

11 MR. FRED. W. MUTH AND DAUGHTERS.

for peaceable behaviour. Modesty forbids the writer relating what happened soon after he strode forth into the open street. Suffice it to say that the Fred W. Muth Company don't quote dirty, sour honey as "southern" any more. They haven't since that memorable morning.

HONEY AND BEESWAX MARKETS.
(Dealers' Selling Prices.)

Chicago, Dec. 17.—There is the usual dullness in the honey trade at this date owing to most of the retailers having stocked up sufficiently to carry them over the holidays; but the stock in the hands of the trade generally is below the normal; hence prices are firm at 15 to 16 cts. for No. 1 to fancy white comb with off grades at 1 to 2 cts. less, amber grades dull at 10 to 12 cts. Extracted white firm at 8 cts. for clover and basswood; ambers 6 1-2 to 7 1-2 cts. per pound. Beeswax 30 cts. per pound. R. A. Burnett & Co.

Denver, January 5.—There is practically no honey left in the hands of producers in this State and barely enough in the Denver market to supply the home trade until spring. We quote strictly No. 1 white per case of 24 sections, $3.20; No. 1 light amber, $3.00 and good No. 2, $2.80; white extracted 8 to 8 1-2 cts.; light amber 7 3-4 to 8 cts. We are in the market for Beeswax and pay 26 cts. per lb. for clean yellow wax delivered here. The Colorado Honey Producers Ass'n.

Kansas City, Mo., January 7.—The supply of comb honey is fair. The demand fair. The supply of extracted is very light—demand good. We quote fancy white comb 24 sec cases, $3.25; No. 1 white comb 24 sec cases, $3.00; No. 2 white or amber 24 sec cases, 2.75; extracted white per lb., 7 1-2 and 8 cts; extracted amber per lb., 7 and 7 1-2 cts; beeswax per lb., 27 cts. C. C. Clemons & Co.

Cincinnati, Feb. 9.—The demand for extracted honey has brightened in the past three weeks. Selling amber honey in barrels at 6½c to 7½c, according to the quality and quantity purchased. Fancy white extracted honey, from 8c to 9c. Comb honey is a drag on the market; fancy selling at 14c to 16c. At this date, we are paying 32c. cash, and 34c. in trade for a choice grade of yellow beeswax. The Fred W. Muth Co. 51 Walnut Street.

Milwaukee, Jan. 31,—The supply of honey is not large. The demand is fair for white. We quote our market today as follows: Comb, white 16 to 17 cts. lb. Extracted, 8 to 9 cts. lb. Beeswax 27-30 cts- Remarks; When shipping honey to this market care must be taken to pack it well to arrive in good condition. J. Offermann & Co.

Toronto, Canada, Dec. 15.—The market today is ranging from 11 to 12 cts. for No. 1 Clover honey, Buckwheat honey and the darker grades selling from 6 to 7 cts. White & Co., LTD.

Worcester and Boston, January 16.—Our honey market is very firm. There is only a small quantity in our market, all stock cleaning up well. Think there will be no doubt but what all good honey will be closed out in good season at firm prices. W. H. Blodget Co.

Cent-a-Word Column.

DO NOT burn your refuse from Wax Extractor. Send it to me and get your cash. Archie L. Coggshall, Groton, N. Y. tf

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WANTED—A small homestead nicely situated for beet and small fruits. Also to correspond with parties having a large apiary to let for the production of extracted honey. W. W. McNEAL, Wheelersburg, Ohio. tf

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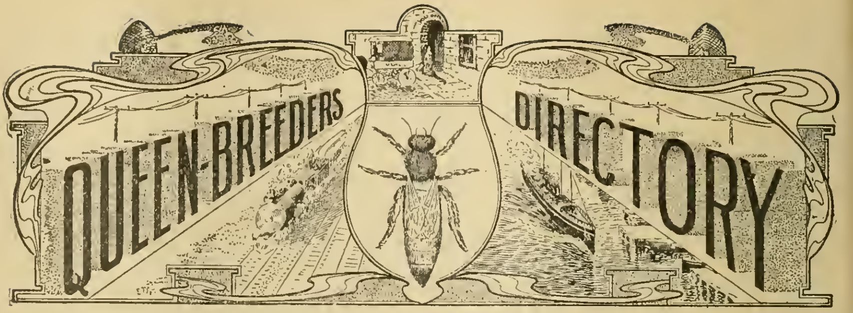
June 7



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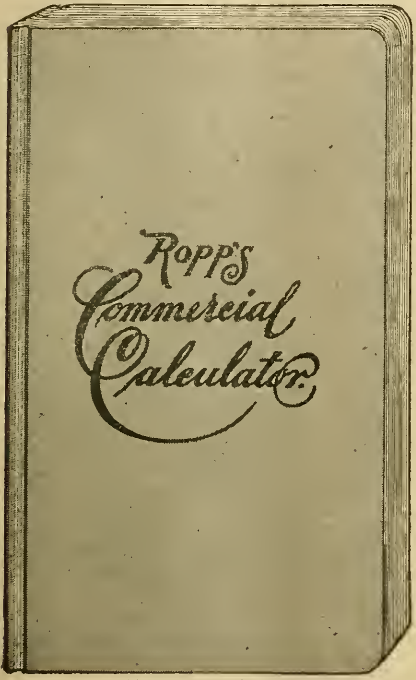

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Aug. 7

TWO YEARS FOR $1.00

After a man succeeds in publishing a good journal, the next step is that of getting it into the hands of the people, of getting them to reading it, and becoming acquainted with its merits. This can be done by advertising, sending out sample copies, circulars, etc. All this costs money. I think I am safe in saying that, for every new subscriber I have received, I have paid $2.00 in advertising; hence, I have always said that a publisher of a good journal could afford to send his paper one year free for the sake of getting it into new hands. It would cost no more than other forms of advertising, and would be more effective; but, for obvious reasons, this plan could not be put into practice; but I am going to come as near to it as I can. I have between 200 and 300 complete sets of back numbers for the present year; and as long as the supply holds out I will send a complete set, and the rest of this year free, to any one who will send me $1.00 for the Review for 1907.

Back numbers of the Review are different from those of newspapers and some journals. The information that they contain is just as valuable now as when first published. In an advertisement like this it is imposisble to give much description, but I will mention one or two features of each issue of

THE REVIEW FOR 1906

JANUARY.—The keynote of the Review for 1906 is "The Control of Increase;" and Mr. Gill, of Colorado, starts off by telling how he completely and profitably controls the increase of 1000 colonies run for comb honey.

FEBRUARY.—R. C. Aikin shows how, with a knowledge of principles, increase can be controlled; but perhaps the most valuable contribution to this issue is from R. F. Holterman, of Canada, describing "Some Short Cuts in the Production of Extracted Honey.

MARCH.—In this issue is illustrated and described the only really successful non-swarming hive that has yet been invented. Its inventor, Mr. L. A. Aspinwall, secured an average of 140 pounds of comb honey the past season from fifty colonies, and had no swarms.

APRIL.—The most valuable article in this issue is from C. A. Olmstead, of New York, in which he illustrates and describes a method of foretelling swarming without opening the hive.

MAY.—In this issue is begun a series of the most delightfully and beautifully illustrated sketches that have ever appeared in the Review—that of the editor's experience in locating and managing three out-apiaries in the wild, picturesque, raspberry region of Northern Michigan.

JUNE.—The article this month on "Control of Increase," is by that veteran, J. E. Crane, of Vermont, and shows how to do the work when the harvest comes early. This issue also gives the editor's experience in moving his 400 colonies into Northern Michigan—illustrated with four engravings.

JULY.—This issue has a beautiful full-page illustration of the Review apiary here at Flint (105 colonies), and the editor gives a resume of his work in this apiary for the first six months of the year—showing where he failed and why he succeeded.

AUGUST.—In this number the editor tells of "Reaping the Harvest in Northern Michigan," and gives pictures of the different apiaries, some at old abandoned lumber-camps, one with a tent for a honey-house, while the reading-matter has an actual flavor of the wild northern woods.

SEPTEMBER.—Of all the articles in this year's Review I doubt if any one is more really helpful than the one in this issue by the editor, entitled "Conveniences in the production of Extracted Honey." It has several illustrations, and shows how to use bee-escapes without the back-aching work of lifting the hives by hand; how to make a honey-knife cut as "slick as a razor;" how to make an uncapping-can for ten cents; how to arrange a cheap automatic strainer, and run the honey directly into the cans; and how to arrange an electric bell, at a cost of 60 cts., that will ring when the can is full.

Instead of mentioning some of the special features for October, November, and December, let me use the space to say that one of the good things that will appear in the Review for 1907 will be a series of articles from E. D. Townsend, Michigan's foremost bee-keeper. All of his writings in the past have been fragmentary, a glimpse here and there, and they have been scattered here and there in different journals. Now he is going to write in a consecutive manner, starting at the beginning of the season and going through the year—just as though he were writing a book. It will give his system of management.

ADVANCED BEE CULTURE

This is a book of 230 pages, beautifully printed, bound, and illustrated, that discusses bee-keeping from a money point of view—shows how to make a pleasant and profitable business out of bee-keeping. Price $1.20; or, the REVIEW for 1907 (and all the back numcers of this year free) for only $2.00.

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HOMES In Old Virginia

It is gradually brought to light that the Civil war has made great changes, freed the slaves, and in consequence has made the large land owners poor and finally freed the land from the original owners who would not sell until they were compelled to do so. There are some of the finest lands in the market at very low prices, lands that produce all kinds of crops, grasses, fruits, and berries; fine for stock. You find green truck patches, such as cabbage, turnips, lettuce, kale, spinach, etc., growing all the winter. The climate is the best all the year around to be found, not too cold not too warm. Good water. Healthy. Railroads running in every direction. If you desire to know all about Virginia send 10c. for three months subscription of the VIRGINIA FARMER to Farmer Co., Box 604, Emporia, Va.

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John W. Hann

WAUNETA, NEBRASKA

DANZENBAKER PRIZES

It is to be regretted that so many bee-keepers are satisfied to produce year after year a very ordinary grade of honey as regards its appearance, when by a little more care, and having more suitable fixtures, and by taking the honey from the hive at just the right time, a much larger percentage of "fancy" or "extra fancy" honey could be produced, which would sell at a much higher price. The experience of honey-merchants generally is that there is no difficulty in disposing of large stocks of fancy or extra fancy, even when the market is dull. It is the inferior grades that suffer most at these times. We believe, too, that bee-keepers would be very much better satisfied with their season's work if their best efforts were made to produce a really fine product. To increase further the interest in extra fancy honey, the following prizes are offered for honey produced in Danzenbaker hives during the year 1907, under the following conditions:

FIRST.—As above stated the honey must be produced in a Danzenbaker hive, either the present style or any Danzenbaker hive that has been put out within the last few years. These hives may be had of any dealer in bee-keepers' supplies in any part of the country.

SECOND.—For Classes 1 and 2 we require a shipment of approximately the amount stated, to be made by the bee-keeper direct to us at Medina. After the prizes have been awarded the honey entered for competition in Class 1 or 2 will be held subject to the instructions of the producer. We will sell it at a five per cent commission or we will ship it to any point direct by freight or express. There being good honey markets in our immediate vicinity as Columbus, Cincinnati, Cleveland, Buffalo, and Pittsburg, it can be disposed of without difficulty at good market prices, and the shipper will not have to lose a good market by shipping it here. Neither the honey awarded a prize nor that which obtained no prize is to be our property, but will be sold subject to the instructions of the producer who sends it to us. We are interested only in inspecting it to award the prizes.

THIRD.—For all honey submitted for prizes we must have a definite statement from the producer regarding the conditions under which it was produced, whether a light or heavy flow of honey, how the colony was handled, how many colonies in the yard, from what source produced, etc.

FOURTH.—For Classes 3, 4, and 5, we must, in addition to the above report have the signature of two witnesses certifying to the correctness of the report. If the party who sends us the report for the competition is well known to us we shall not require these witnesses. References may be given instead of the signature of witnesses if desired. All parties intending to compete for these prizes should send for blanks which we will furnish, on which the report may be made out.

FIFTH.—It will be noticed in the last three classes, three to five inclusive, that it is not at all necessary to send us the honey—all we require is a report.

SIXTH.—We reserve the right to limit the number of awards in each class, or to make no awards in a class if there are no satisfactory entries for the same.

SEVENTH.—No contestant will be awarded more than one prize in each class, but may make two entries if desired—one in Class 1 or 2, and another in Class 3, 4, or 5.

The classifications for the prizes are as follows:

Class 1.—For best shipment of 200 lbs. of comb honey in Danzenbaker hive.
Class 2.—For best case of comb honey in Danzenbaker sections.
Class 3.—For best report of yield from single colony in Dazenbaker hive.
Class 4.—For best report of yield from five colonies in Danzenbaker hives.
Class 5.—For best report of general results from use of Danzenbaker hive.

For each class there will be ten prizes as follows:

First.—$10.00.
Second.—$7.00.
Third.—$5.00.
Fourth.—$2.00.
Fifth to Tenth.—$1.00 each.

Five Classes.
Ten Prizes for each Class.
Fifty Prizes in all.

This is the time to decide to enter this competition. No matter where you live, whether in the United States or elsewhere, you can certainly find one class in which you can make an entry; and as there are ten prizes in each class we believe that no one will be greatly disappointed in the results unless it is ourselves, and we hope that we shall not be, but see a large number of entries. Even if you fail to get a prize, you will doubtless have increased the value of your own product by your efforts to produce some big results or an extra quality of honey.

The A. I. ROOT CO., Medina, Ohio

The American Bee Keeper

April
1907

Fort Pierce Fla.– Falconer, N.Y.

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SECTIONS

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The metal parts are stamped from hard steel plates and all are thoroughly nickel plated.

It is constructed on original lines that overcome all of the objections common to most foundation fasteners.

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June 7

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St. Joseph, Mo.

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THE AMERICAN BEE-KEEPER

Entered at the Postoffice, Fort Pierce, Fla., as second-class mail matter.

Vol. XVII. APRIL, 1907. No. 4.

STATUS OF BEE-KEEPING IN MASSACHUSETTS IN 1906.

BURTON N. GATES.

A YEAR AGO this last fall, the Worcester County (Mass.) Bee-Keepers' Association undertook to find out how many colonies of bees and the production of honey its members represented. The returns were comparatively few; nevertheless they were significant. A few generalizations were made and appeared in the American Bee-Keeper for December, 1905.

A similar questionary was sent out to the members of the Worcester society merely, this past fall; the returns have been even more numerous and especially significant. The indications are that bee-keeping in this state is not on the decrease, nor at a stand still; but that it is on the increase.

The questionary was as follows:

How many bees had you, spring count? Fall count? For what kind of honey do you work? What was your crop of comb? Of extracted? Have you had any signs of unaccountable dwindling? Of disease?

Returns have come to hand from 41 bee-keepers, of which 38 are of Mass., and figure in the average below. About seventy-five of our members who keep bees were given opportunity to respond; of those, a little over fifty per cent. have responded, which is rather a higher average than the usual response. The remaining members, who did not reply, do not represent any great production of bees or of honey, in most instances.

The figures for the basis of the following conclusions, as afforded by 38 replies are:

Number of colonies of bees, spring count, 359; Fall count, 527; total production of comb honey, 10,117 pounds; total production of extracted honey, 6,098 pounds; total honey produced, 16,215 pounds, or eight and nearly one-quarter tons.

Summarizing these results, we find that the average yield per colony, spring count, is 45 pounds. This exceeds the average of last year's figures by ten pounds per colony; and the figures of the U. S. census of 1900, which are 13.0 pounds per colony, by 32.0 pounds per colony. The Massachusetts averages of both this year and in 1905, noticeably exceed the census figures of California, which are given as 28.0 pounds per colony. Still we ordinarily consider California as far better bee country than Massachusetts.

Considering now the production of comb vs. extracted honey, we find that as the above figures show that nearly twice as much comb as extracted honey was produced. Stated in terms of an average, 266 pounds of comb and 186 pounds of extracted honey were produced by each bee-keeper who responded. For reply to the inquiry, "What kind of honey do you work for," five work for extracted only; twenty-two for comb only; eleven for extracted and comb both; and two for more bees in preference to honey. It would be safe to say, even without these figures, that in this state, comb honey production is in the lead.

The increase of bees, kept by those who responded, as shown above, are as encouraging figures as we received. We did not care to learn so much whether the increase was due to natural or artificial measures, or whether it was due to purchase by the bee-master; but we did want to know how many more bees the bee-man was willing to put into winter quarters, than he had in the spring.

The figures as above given, show among the 38 persons who responded, that no person keeps any great number of bees; but that a number of persons keep a few. Dividing the number of colonies which went into winter quarters, among the number of respondents, each would have had fourteen colonies. But the most encouraging thing in the returns is, that after a generally conceded poor season in which there were very few swarms, there go in for winter among these 38 people, 168 colonies more than they had in the spring; in other words, each individual, if an average be taken, increased his apiary the past season, by four and one-half colonies.

Disease, while it is known to exist in most parts of the state, is not reported but by four individuals. This we feel confident in saying, is due, in a measure, to a lack of knowledge in the bee-keeper, of what a diseased colony is. With some, the colony might have to be on its last breath, before it would be recognized as diseased.

To the query on hives, the answers are too variable and too few to enable much of a conclusion. All manner and form of hive, is apparently in use, even the home-made box-hive, I am sorry to say. Even more of them would be found, I fear, if the returns were from those other than the progressive, who are usually anxious for the opportunity to join and participate in our society and whom these returns represent. Without tabulating the results of this question, the returns show the Langstroth frame to be the most popular and is used in both eight and ten frame hives.

Besides the returns above summarized, we heard from three other large apiaries, owned by members outside of the state.

Mr. Allan Lathan, of Norwich, Ct., increased from 100 colonies to 123, a large part of which are in Massachusetts, which, of course, would have much bettered our figures, but which have not been averaged in the above. From these he took 1,500 pounds of comb and 2,000 pounds of extracted honey.

Mr. A. C. Miller, who we all know something of, increased from 22 to 35 colonies; obtained and produced upward of 550 pounds of honey. (Note—Many of Mr. Miller's bees are devoted to experimental uses.—Ed.)

A report which we all envy, comes from Vermont, Mr. R. H. Holmes, of Shoreham. Mr. Holmes' product is marketed chiefly in Worcester, where it is considered the finest of honey.

His whole crop is practically of white clover and amounted this year to 10,200 pounds of comb and about 600 pounds of extracted. This splendid crop averages 57 pounds to the colony and was produced while at the same time, Mr. Holmes was increasing his apiary 25 per cent. Mr. Holmes had in the spring, 190 colonies and began winter with 250. Figure on any basis you will, the interest on the money invested and ask yourself if it is not good enough for most folks?

Of course we fully realize, that on so few notes it is not safe to ground too great conclusions; but considering the data in hand, from whom it came, it is of interest if not instructive, to generalize. At some future date, it is hoped to have figures which shall express more accurately and with even greater interest the bee-keeping status of Massachusetts.

Clark University, Worcester, Mass.

Photo by E. F. Atwater.

APIARY OF E. F. ATWATER, MERIDIAN, IDAHO.

FREIGHT RATES ON HONEY—MR. MUTH'S VIEWS SUSTAINED.

J. E. HAND.

EDITOR AMERICAN BEE-KEEPER: As a producer and shipped of comb honey I can heartily second every word of Mr. Muth's article in the February Bee-Keeper.

The effort on the part of the National Bee-Keepers' Association to secure lower rates on honey is highly commendable and should receive the hearty co-operation of every producer of honey.

Perhaps no man in the United States is in a better position to get at the inside fact relative to the shipping of honey than is Mr. Muth, and it is useless for any one to attempt to deny the fact that the present high freight rates on comb honey are largely the result of carelessness on the part of the honey producers themselves, in failing to use full sheets of extra thin foundation in the sections and also, in failing to properly prepare and crate their product for shipment.

Because comb honey is necessarily of a frail nature, and therefore easily damaged by careless handling, is all the more reason why greater care should be exercised in preparing it for shipment so that it will withstand the rough handling to which all freight is more less subjected. Personally, I have no complaint to make against the freight handlers for the way they have handled my honey since it is crated and packed in such a manner that it will withstand a great amount of rough handling, and although I ship all my honey and guarantee safe delivery by freight, I have never yet been asked to make good any breakage for the past fifteen years, or since I learned by dearly bought experience to use full sheets of foundation in the sections and how to properly prepare and crate my honey for shipment. Before that time I lost $35 on one shipment while I was laboring under the delusion that natural combs were so much superior to combs built from full sheets of extra thin foundation. The difference between the friableness of the comb that is built from full sheets of extra thin, new process foundation and that built without the aid of foundation is too infinitesimal to be noticed and sinks into utter insignificance when compared with the many advantages to be gained by the use of full sheets of extra thin foundation.

By full sheets I mean that the sections should be so perfectly filled with foundation that there is not a crack that you can see through any where. Regarding the use of bottom starters I will say there is a better way, which will soon be made public through the bee journals. That those who advocate the non use of foundations in sections are the ones who are loudest in their complant against the freight handlers is of itself a significant fact.

In my 30 years as a honey producer, nearly one half of which time I delivered a good part of my product direct to the consumer, I have never yet received an order for a single pound of honey to be produced without foundation.

Birmingham, Ohio.

BENEFIT OF BEE-KEEPERS' SOCIETIES

GEO. B. HOWE.

I THINK there are very few of us who give this subject the careful thought and thorough study it deserves. First, there are too many that if they do not receive a financial benefit the very first thing they give up and say the societies do not amount to anything.

Of course, if you are one of the "know-it-alls," I advise you to keep out and avoid being disappointed. On the other hand, if you are glad to help and be helped, you are one of the very best men or women to advance our societies.

As one bee-keeper said to me (and that was W. L. Coggshall, one of the largest bee-keepers in the world) "Why, the enthusiasm I get at these conventions is worth a whole lot to me." Now, if such men receive benefits, what must it mean to you and I. Not only are we benefited in a social way, but what is it worth to hear some veteran tell us at these meetings just how he does this or that. Reading these in a journal is all right as far as they go, but they are likened to a photo, there is so much lost in the reproduction that is valuable.

I think you will all agree with me when it comes to passing laws for the bee-keepers, the influence our societies have. How much influence would you or I have to write to a senator or congressman on some bill that should be passed. Now, note the difference when we write that the St. Lawrence and Jefferson Counties Bee-Keepers' Societies wish this bill passed. Do you not see the real necessity of our societies for the protection of our pursuit?

What would have been the price of supplies today if it had not been for our societies? No one can say they would not have been from five to twenty-five per cent higher than they originally were. Now, can any one say they do not see a real benefit right here? This is one thing that has made our societies so popular during the past year.

In conclusion I will say that we, as a body, bid defiance to what, as an individual, would be unsurmountable. Let us hold fast to each other and be reasonable and fair in all our dealings, and we will some day be one of the grandest societies in the world. Let us not forget that our success is largely due the W. T. Falconer Mfg. Co., who in our hour of need gave us the very lowest prices possible to the welfare of a reliable firm. Now let us not consider for a moment the lowering of prices by any other firm, for it means that we would get such prices only for a time, then, (after our friends had been compelled to withdraw these prices for the lack of our support), they would have us at their mercy and then could dictate prices to us once more.

Black River, N. Y.

The American Bee-Keeper Three Full Years $1.00. To New Subscribers, Three Full Years for Ninety Cents. Is that Cheap Enough?

PLANNING A CAMPAIGN FOR THE COMING SUMMER

ALLAN LATHAM.

IN CERTAIN parts of Connecticut, northern New London county for one, the story of the honey-flows is as follows: Large maple bloom in April upon which the bees make big strides in brood-rearing; scanty fruit bloom in May which keeps bees busy, sometimes leading to swarming but rarely furnishing any surplus; a moderate to heavy flow through June of a variety of honey scarcely edible; scattering flow first part of July from clover and milkweed up till the 10th when sumac starts in, then three weeks of sumac one week being heavy; no honey at all throughout August; a light to good flow in September from goldenrod and asters.

If one follows the usual procedure of working from the early season through for comb-honey he is sure to come out at the end with a crop varying from (reckoning 100 to the colony), sixty boxes of black honey (stuff), 30 of edible mixed goods and 20 of good white sumac to 20 of the black, 40 of the mixed and 40 of the white. Thus he uses up many boxes, much foundation and time procuring a great deal of unsalable honey. To be sure, I have just sold my last crop of last season getting, after cutting from the sections and melting down and straining, six cents per pound. The 16 pound cake of excellent beeswax made some atonement for the labor.

Having tired of the results as outlined above I have determined upon a mode of procedure which I will now describe. I have considered carefully the Doolittle method as described in Gleanings but doubt its working here because of the likelihood of getting a lot of the black stuff into the sections by its being carried up from the combs below. But I shall try hard to get in the "millions of honey at our house" part of the plan.

Through May I shall simply let the bees build up to what strength they can, supplying a second story only to such colonies as show unusual strength. During the latter part of May and the early part of June I shall raise the brood nest and put frames of comb or foundation below placing also one frame of brood below. After the queen is well established below I shall shut her there by excluder, possibly about the middle of June. Thus I expect to cause the filling of the combs above with the black product gathered in June. In case insufficient room results I shall exchange combs or possibly supply case of sections to the stronger colonies.

My expectation is that the bees will with this treatment swarm little or none at all, and by the 10th of July the hives should be roaring full of bees. At that time or earlier provided there is any show of white honey I shall place case of sections between the two stories. By the time this case is well along I expect the sumac flow to be well started. I shall then remove all the upper stories of combs full of the dark honey and shall tier them above a few weaker colonies or nuclei. At the same time I shall put two cases of sections on every colony that can care for that number. From then on through July I shall push the colonies as hard as possible, avoiding an excess of room as the sumac season wanes.

I trust by this method to cause more of the dark honey of June to be turned into bees for the white honey harvest. If necessary in any case I shall requeen in order to keep brood rearing at its height through June. If successful this method will avoid all sections of dark honey and should double or treble the amount of white honey.

During the last week of July I shall remove all supers of sections as I am absolutely certain that they will gain nothing but propolis by remaining and may lose much of their value. I shall at the same time replace the stories containing the dark honey. Thus during August, a month when bees in this locality do but little brood rearing, the bees will have a store of forty to fifty pounds of honey above the brood nest and will keep up the strength of the colonies so that they will be fit for the September harvest of white honey, a crop better for wintering than the June honey and mighty good for one's own eating.

Thus is the plan briefly outlined. I may find it necessary to modify it here and there, and there is much uncertainty as to whether the replaced story of honey should go above or below, and much uncertainty as to when excluders should be on and when off. These matters can only be settled by trial. I expect therefore to run a score or more of colonies one way and a score or more the other way whenever the roads seem to fork. The results will then tell me which way to adopt.

It may call for re-queening in early August in order to be certain of the dark honey of June being turned into workers. At any rate I shall make a bold attempt to have the extra frames come out in the fall empty of anything but dark honey, and shall hope to avoid all feeding of sugar, making this otherwise almost unprofitable flow of June turn into a blessing.

Norwich, Conn.

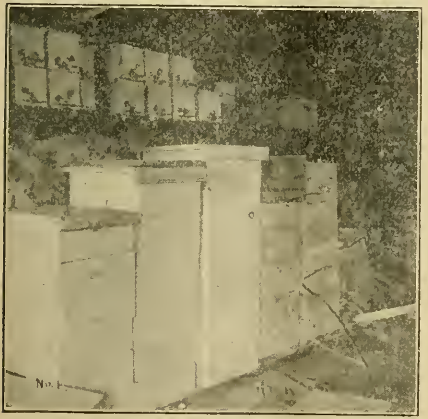
The American Bee-Keeper Three Full Years $1.00. To New Subscribers, Three Full Years for Ninety Cents. Is that Cheap Enough?

E. H. DEWEY'S DOINGS.

Great Barrington, Mass, Jan. 7, 1907.

Editor American Bee-Keeper:

The mysterious disease that everybody knows all about and which no one knows how to cure has caused me no little annoyance, to put it mildly. Last season I did not dare to rear a queen for shipment but raised some fine ones for my own use. The season before, I had a few pictures taken by a friend of mine and they may help start a fire down where you live—you and the deacon don't need as much as we when the mercury says 15 below for a week at a time. Can't help but preach a little after spending a Sabbath reading home talks. But to return to the photos.



IN DEWEY'S DEN.

Number 1 represents a portion of the den, No. 2, a corner of the bee-yard, and No. 3, an easy method of securing bees for the nucleus hives when supers are removed. Little boxes are slipped over the cones and the bees are trapped and removed from the supers at the same time.

Do not waste a stamp on these, simply burn them up if they are not available—do so any way.

Yours truly,

E. H. Dewey.

ABORTIVE INSTINCT.

ALLEN LATHAM.

As few deny, bees do most if not all of their work through instinct, impelled by an impulse that is like a ferment action on the nervous system. Remove this ferment so to speak, and you have an inert object, not an active, eager bee.

When colonies act as a unit the ferment is not acting on every bee, but only on a few individuals. Just as a mob of human beings will do things which as individuals they would not do, so bees in a swarm are impelled by those few which take the lead. Take away a few, possibly one, leading spirit from the mob and it will disperse quietly homeward. Take away a few bees from a colony, if those few are the right ones, and that colony will then no longer continue along the lines it was previously following.

It will sometimes be discovered, I doubt not, that queen-cell building, drone-comb building, pollen-gathering, and in fact every phenomenon of the bee-hive is brought about by impulse in the individual bee. Possibly, not necessarily, only one bee feels the impulse at first. This bee then becomes an incitant to similar action on the part of other bees.

Especially is this true in swarming and all swarm action. There is not a question in my mind that swarming is brought on by a few excited, discontented bees. Every one who has studied this matter knows that previous to the issuance of a swarm there is much preliminary work done by a few eager enthusiasts. Then after the swarm has clustered there are only a limited few which interest themselves in searching for a home, or in preparing for the trip to that home.

Moreover, it is true that most bee-instincts are short-lived. True it may be that the long-lived bee is the best honey-storer, but may it not be largely because such bees have long-lived instinct for gathering nectar? At any rate, we shall find that in most colonies each instinct of the worker as she passes through life is rather transient.

Thus it sometimes happens that a colony comes to a stand-still because of some calamitous break in the succession of instincts. Such colonies are said to sulk. Yet they never sulk as we sulk. They simply cannot help it, are in fact helpless because of the lack of impulse to move. (Closely akin to our own sulkiness I will frankly admit, but much less sinful than ours.) Break up that blockade of the succession of instincts, give some electric shock so to speak to that colony, and it will once more carry on its wonted activity.

We too often blame our pets for failure to do what we wish them to do, whereas all the time we have failed to do our part and are, moreover, densely ignorant of what that colony is in vital need of. Long ago, fifteen years perhaps, I came to the conclusion that bees never truly sulk, and I think the bee-keeper who charges bees with this deliberate act to be both unjust and illogical.

This past summer I had a most remarkable case of this break in the succession of instincts, and after the reader is told of this he will doubtless be more in sympathy with what I have said before.

About July 20th I visited an outapiary of my let-alone-hives, here in Norwich. I found a colony idle though a fair flow was on, and saw that a swarm was in process of evolution. I cut out all cells, gave room in front, and tried to drive the bees to the rear where there were empty frames. I knew that if I once got a good cluster to form in those empty frames I should stand a good show of aborting that swarm and getting some honey. But the bees would begin to roll out as soon as I left them, and as my time was limited I gave up the fight.

It was September 10th when I next visited this apiary, and I had practically forgotten about that swarm-aborting episode. As I was at work upon a hive I was accosted by the farmer's wife:

"I suppose you know the bees swarmed."

"No, when was it?"

"Why! Hasn't anybody told you? It was six weeks ago or more. I'll show them to you."

"So you hived them. That's fine!"

"No. They are on the tree."

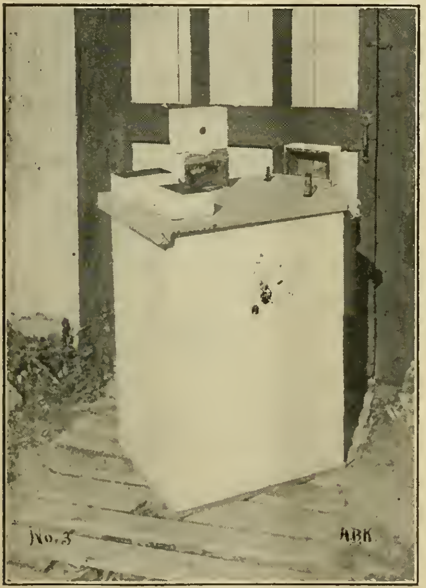
Indeed, they were there. Had swarmed July 27th, and on September 10th formed still a respectable swarm, clustered 25 feet from the ground on a forked branch of a Roxbury russet.

I took the bees down September 12th. There were three small sheets of comb, the largest no bigger than my hand. No brood, no honey, no pollen, a few eggs. Cocoon-lined cells showed that about 800 young bees had been reared to maturity.

Though a fair honey flow was opening up, this swarm was practically inactive, living only from hand to mouth. I hived it on combs with brood in all stages, and looked for it to go to work. Not so, it continued inactive, and it was only by removing the queen and substituting another that this swarm was induced to take up the active work of a normal colony.

Now for the explanation:

The swarm came out on July 26th or 27th, there being some dispute as to the date. Immediately following this time there came a spell of the damp, foggy weather which prevailed so much here in New England during the past summer. When fair weather finally came, there came with it a dearth of nectar in the flowers, for our season closes here about July 25th, not to open again till September. To keep from starving these bees were forced to forage on that first sunny day. The homing instinct died out in those bees which had possessed it, and did not develop in any others, for there were lacking the conditions which will bring on this impulse. So the bees simply remained where they were.



TRAPPING BEES FOR NUCLEI

A desultory existence was kept up. Such wax as had been secreted was made into comb, and a few bees reared; but the great mass of bees clung there idle, waiting for something which did not come. To begin with they were bees at the right age for comb-building and home-making, ready to hustle if in a hollow tree and the nectar coming in freely. So their instinct lay dormant waiting till it could go its natural course.

I thought that hiving them on combs of brood, and thereby giving them responsibility, would start them into activity, but no, they were so fixed in their inactivity that even such treatment failed to break the trance. But when their queen was taken away and another substituted, they awoke as it were. Within a few hours all was active life in that hive, just as in the wonderland kingdom when the prince kissed the sleeping princess.

I do not know how large the original swarm was, but the seven-weeks-old swarm which I hived, though it would rank below an average prime swarm would compare most favorably with first-class second swarms.

Lest some may think that these bees had to stay on the tree because of some inability on the part of the queen, I will state that this queen was only a year old, active, with perfect wings. That the swarm remained on the tree from no other cause than lack of impulse to go away, I have not the least doubt.

Thus we have here. a clear example of abortive or thwarted instinct, of lacking impulse, and of resulting strike or "bee-sulks" Could the bees help it? Not one bit! Being entirely without reason as we possess it, they were unable to cope with a difficulty which prevented the calling out of the instincts which serve to bring about the phenomena of the bee-hive. Only two instincts, possibly, remained active, the instinct to keep together, and the instinct to gather food by which to keep alive.

I offer this, which seems to me to

be a most peculiar and yet perfectly normal case under the circumstances, for those who may wish to study the problem which it involves.

Norwich, Conn.

MARCH MEETING OF THE WORCESTER COUNTY, (MASS.) BEE-KEEPER'S ASSOCIATION.

BURTON N. GATES.

THE MEETING was called to order at two o'clock, Pres. Gates in the chair. After a short business meeting, the speaker, Dr. James P. Porter, of Clark University, was presented. The address was illustrated with the lantern.

Dr. Porter is authority on behavior of the lower animals or as it is termed, authority on comparative psychology. He has made a special study of ants, published a paper on the activities and variation in spiders, and is well read in the investigations of the Europeans on bees. In his address, he gave much of the best recent investigation in Europe.

NATURAL HISTORY ADDRESS.

In the first place, he illustrated and traced the origin of the honey bee from the lower, solitary bees. Roughly speaking, all bees are divided or may be grouped under two heads, those in which the mother or the queen lives to see the brood appear, as is the case in the higher bees, the honey bee, the bumble bee, and the mosquito-bees or stingless bees (meliponinae.), and into those in which the mother dies before the brood appears. The speaker showed pictures of these various bees and their nests, explaining their life habits.

Having shown the high level to which the domestic bee has evolved, the lecturer described the sense organs of bees in comparison to the organs of ants and even in vertebrate animals. He described the function of the special organs of the antennae and the activity of bees in finding flowers. Forel, a Swiss naturalist, following the work of Plateau, has shown conclusively that the eye plays the largest role in the way that a bee finds a flower of any sense which the bee has. For example, a dahlia was covered up in part; in some cases the rays were left exposed, in others the disc was uncovered, but whatever was left exposed, was sufficient for the bees to locate the nectar by. In other instances, the experimenter, covered up the flower with a leaf, as a grape leaf, and not until a bee stumbled around underneath the foliage and ran against the covered bloom, did they succeed in finding the nectar.

A slide of the section of the brain of the ant, worker, drone, and queen, showed a direct corelation between the structure and the functions of the respective individuals. For instance in the drone, the optic parts are well developed in connection with the necessary sight in finding the queen in mating.

Dr. Porter's address was exceptionally instructive.

WINTERING EXPERIMENTS.

Mr. Herbert F. Cary, of the old firm of W. W. Cary and Son, of Lyonsville, Mass., was present and upon invitation, spoke on the problem of wintering, with special reference to his personal experiment. In part, Mr. Cary said:

"For my locality, for New England weather, where there are sudden changes, and long periods of extreme cold as we have experienced this last February, cellar wintering is by far the most satisfactory and safest. Twenty pounds of honey will surely carry a colony through in the cellar, while thirty or more are necessary out of doors. Out of a hundred colonies put in the cellar last fall, I have taken out over 12 to 14 quarts of bees thus far. This shows no great mortality.

"This season we experimented with a few colonies which had the covers sealed down tight. In order to see what their condition might be, I removed some of the covers, and found that there had no water collected and no signs of dampness as I had expected. We try to keep the bees in the cellar as long as content; last year we put them out the 14th of April. In some years we have supplied water in a bottle through the chaff cushion in order to keep them quiet; lately we have not gone to the trouble.

A CORNER OF MR. DEWEY'S APIARY.

"About April 20th, we will commence to manipulate the bees, having previously examined them. The Alexander method of strengthening weak stock is a good one provided you remember that Mr. Alexander emphasized the necessity of having the nurse colony a particularly vigorous one. When the bees are hatching freely, it is often well to average up the colonies by exchanging combs of sealed brood from strong colonies for the empties of the weaker colonies. By the middle of May, in a ten-frame hive, there should be at least seven or eight frames of brood."

Mr. Cary, as a producer of bees and queens, has a chance to learn the conditions of bees throughout the state. He says that there is brood disease in the state, unquestionably. He moreover is an advocate of inspection of apiaries. Mr. Cary gave several localities where to his knowledge in Massachusetts, Connecticut, and in eastern New York, there were diseased colonies last year. He is anxious, as are others of the society, to see some move for protecting the bee-keeper.

The session of the society was unusually long; there beign much interest in the topics before the house. We had several with us from a distance, including Mr. Lovering, of Greenfield, Mass. A committee was appointed to secure a field day and convention at the earliest opportunity this summer.

FOUR VETERAN BEE-KEEPERS OF MASSACHUSETTS.

John T. Gould, No. 2, Ipswich.

BY GEO. W. ADAMS.

HALE, HEARTY and full of enthusiasm although well past 90, Deacon Gould is easily the Nestor among Essex Co. bee-masters. It would seem that the old North Shore must be a healthy place when one meets a man of past four score and ten tramping the frozen marshes on a zero morning carrying his shotgun as lightly as a boy and chatting pleasantly of how Henry Alley, now the veteran among queen breeders, worked with him as a boy and learned from him the first principles of bee-keeping.

The good deacon formerly lived in Wenham and sent from there to Boston the first one-pound sections of honey ever sold there. In those early days he cleared in one year over one thousand dollars from his little apiary.

At present his apiary is small, as his farm, one of the most productive in Ipswich, is situated at the head of tide water and the salt meadows afford no pasturage; but he is as skillful in handling bees as he was three-quarters of a century ago. I wonder if a story of his boyhood, told me by a family connection, is true. He was not a deacon then, and it shows a bee-master is born, not made.

The story goes like this: When about eight years of age he had some trouble with the person who presided over his mother's kitchen—whether he had been experimenting in "stimulative feeding" among the preserves, or had "travel stained" a newly-scrubbed floor, I am unable to say, but he was summarily ejected and told to keep out. "The boy is father to the man," so his steps naturally turned toward his father's little row of hives under the cherry tree; and arriving there he found a swarm clustered upon a current bush, while not far away the family cat basked peacefully in the sun.

It was the work of a moment to catch the feline and while she was caressed in his arms the bees were gently persuaded to leave the bush and cluster on her tail. All went well, and a goodly portion of the swarm having attached themselves to this novel support, and puss becoming restless, the kitchen door was pushed open, the cat turned loose and —things happened.

As told the writer, the foxes of Sampson in the Philistine corn were slow and cool despite their fire brands, compared to that cat in the kitchen.

This veteran bee-master has always stood staunchly for temperance and clean civil government, and through a long life has been a power for good in the community.

This is the second in a series of four biographical sketches, the first of which appeared in March together with portraits ofthe gentlemen included.—Editors.

We wish to thank our readers for their cordial help in introducing the Bee-Keeper. The subscriptions are flowing in splendidly. (M.)

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FEEDING SUGAR.

C. W. DAYTON.

I NOTICED your remarks on feeding sugar on page 245 of the November issue of The Bee-Keeper. As I am one of the cattle and get a chance to go out on the grass and graze with the common herd, I will append a little experience.

Every spring, when it can be seen that we are going to get a good crop of honey two or three of the "big bee men" come to me to borrow a five-gallon can of honey, promising to pay it back later when they get to extracting from their own bees. You see I always keep several tons on hand from previous years. They want it to use in their own families. You may have noticed that where a man can get "trust" he invariably takes the best grade.

(11) ONE OF C. W. DAYTON'S APIARIES.

Well, what I am about to relate occurred two years ago. This season there was no best about it. It was all poor. It was all "fine" in my case because I had sold out the most of my second and third grades and there was wanted some off grades to balance the large amount of strictly water-white that still remained.

In the winter, two years ago, it was nice and warm, so that the bees reared brood and used up their stores early and required feeding before sage came into bloom; so there was a good deal of sugar fed. One bee-keeper who borrowed honey said he would pay when his honey got good as the first extracting would contain more or less molasses, glucose and sugar. He said that he fed plentifully, as, what the bees did not use, would go into honey.

I did not need to see the inside of his hives in order to divine a few thngs. By my swarm system the swarms are all put back while his swarms were hived in new locations. By my plan the colonies are very populous. When I began to extract from combs which were entirely sealed he began to extract from combs which had a sealed patch in the middle the size of two hands. I did not need to see this sealing before the honey harvest started to determine the time that the honey was stored. When I heard that he was beginning to extract I took a spin on my wheel over to his apiary. I saw the extracting being done. I saw the sealing the shape of round patches in the middle of the combs. That is not the way it is done when honey in the flowers is plentiful. They seal all the way across the comb. Mine was sealed clear across.

He swung considerable elegance unto himself because he was able to begins to "take out" from his little colonies as soon as I from my populous ones while his number had gone skyward as well.

My honey is kept on hand the year round. If a consumer wants honey they always know where to get it. If the honey is right they will never buy anywhere else. I never urge them to buy more than they call for. I respect their judgment. To do otherwise is to treat them as if you considered them foolish. I have not asked a person to buy honey in twenty-five years. I show what I have. If they need, they know.

Where a producer has some maple sugar or sorghum molasses, or berries or other fruit, turnips or a quarter of beef it will generally be "spoken for" or engaged beforehand. Where honey is all sold off close in the fall and early winter, when honey is about to be had the following year there will be sure to be several cans "spoken for." And they will speak for that that is new. They have the idea that honey is like strawberries—the largest and finest come first. And it can never be gotten too early to suit them.

This apiarist took a load of his earliest honey down into South Los Angeles to satisfy their "watering" mouths, at three to four cents a pound above the wholesale prices. Do you blame him?

"Yes," said he "I sold $2.00 worth to your blacksmith".

"Yes," said I, "that is good, I knew that he wanted some honey."

Well, if all the profits go into the pocket, then it is a certain sign that there is a very little profit in it, and if you are a real experimenter you can easily try your experiments at the expense of another bee man's honey crop, "now-a-days."

It was toward the end of the honey flow when I went to the city, and instead of sharpening my pick on my own forge, as usual, I took it to the blacksmith.

"Ahay, there, Dayton, I thought you were dead as you did not come around in so long! Say, now, look a'here. What did your bees gather honey on up there this year?"

"Same as usual," said I.

"This I bought wasn't 'as usual.' I bought $2.00 worth of your neighbor bee-keeper up there. Say are you sure there ain't some tart weed around that bees work on. This I bought, at first, appeared all right, but some how, it got worse and worse. In fact I can't eat it any more.

"Say, Jim, go to the house and fetch that honey, tell mother that Mr. Dayton is here!"

"Well Mr. Brown," said I, "I think I can tell what is the trouble with your honey. You see this neighbor fed his bees sugar and molasses to keep them from starvation last spring. He fed in milk pans in the open air. Some strong colonies got a great deal while weak colonies obtained less. The strong colonies soon got it ripened and sealed over in the combs. When the bees began to store honey from the natural flower it was spread around in the combs around this patch of sealed sugar and molasses. My combs are small and my colonies exceedingly large and on these accounts they get their honey sealed as soon as any. This bee man looked in his hives and saw quite a patch sealed and guessed it would do if Dayton's would. If honey is two-thirds ripe it may keep if the weather is dry and warm but if part is ripe and part thin and watery nectar it makes an abominable combination."

I observed when at his apiary that the nectar was not ripe enough so that the cells were sloped down from the sealed part to join with it, as would have been the case with ripe new honey.

Chatsworth, California.

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THE MEDICAL SIDE OF BEE-KEEPING.

DUDLEY B. TRUMAN.

IN THE BEE PRESS there are constantly being made so many wild statements upon the medical side of bee-keeping that a few remarks tending to show the lines upon which investigation may be carried out, will not, I think, be altogether out of place.

These remarks will center about two diseases—rheumatism and diabetes; and the second of these I especially hope that you will consider carefully, as I think it opens up a possible new source of profit to bee-keepers.

With regard to rheumatism, on the one side we have the medical scientists stating that it requires thousands and thousands of bee stings before the slightest trace of a cure is obtained.

On the other, we have the positive statements of numbers of bee-keepers that they have been cured of their rheumatism by taking up bee-keeping.

How can these two opposing statements be reconciled?

Let me begin by telling you one of my little stories. About two years ago a bee-keeper of a finely bilious description arrived here from Canada. He claimed every invention under the sun,—smokers, movable frames; extractors, and among the rest, the rheumatism theory. He stated that he had been the first to communicate to the papers how bee-stings had cured his rheumatism, and how he had become so innoculated that he could no longer feel the stings.

Unfortunately he proceeded to demonstrate, and in the course of the demonstration he happened to put his hand in a gloveful of bees. That disposed of the innoculation theory with a rush.

This set me to questioning about the rheumatism part of it. I examined his finger joints, and asked sly questions of his wife, and I thus found that he had undoubtedly suffered and was undoubtedly cured. Indeed the knots in the joints could still be felt.

But there was one point that he let drop which gave me the hint:—From the day he took bee-keeping he had never been without a jar of honey on the breakfast table.

And now for the theory of the thing. About the causation of rheumatism little is known, but this much is certain. The immediate (or perhaps I should say, the mediate) cause of rheumatism is "sarcolactic acid," an acid that is formed from defective change in muscle sugar. Is it not possible that the taking of honey affects the formation of this muscle sugar just as honey mixed with glucose (dare I say it?) affects the glucose?

Or, here is another suggestion, if that does not please you. Formic acid, the acid of honey, is similar in its action to salicylic acid, the antiseptic that is now taken into the stomach as a cure for rheumatism.

And lest you should think that this is a pure speculation I may say that for the last two years I have been experimenting with this method of cure and am personally quite convinced that it is practicable where the rheumatism is purely chemical and has not gone on to the stage of actual deformity and its accompaniments.

And this brings me to the second of the two diseases I purposed to refer to. A disease that I somewhat grudgingly speak about, and only publish because I have not here the opportunity of carrying out the ideas that I have conceived.

In a former paper you may remember that I hinted at 'a constituent of honey more valuable than honey itself." I had in my mind at that time the action of a certain product that I am now going to speak about.

Let us first consider the facts perfectly impartially. A bee goes to a sappodilla, a plum, or an apple, or an old molasses tub. And from these sources it obtains "dextro-rotary" sugar or dextrose. There is no question about this. A scientist can put it under the polariscope and see it just as you can put a bug under the microscope and see that it has six legs. In the same way, so Prof. Cook inform us, the sugar from flowers is mostly dextrose.

Under the action of a ferment given it by the bee this dextrose becomes "digested" sugar, laevulose, or honey.

Further this action occurs, in the main, not in the bee's body but outside of it. This point is borne in upon us by (1) the phenomena it explains.

(a) Green honey when left on the hive or kept in the sun at body temperature ripens; ie., it loses its dextrose taste and takes on the oily taste of laevulose.

(b) Alexander, by placing honey in warm tanks can artificially "ripen" honey even before sealing it.

(2) By the fact that honey is not "ripe" till after it is sealed up from the care of the bees in the hive.

(3) By analogy. For we know that human saliva can act upon starch in a similar way outside the body, provided the body temperature can be maintained. Why therefore should not bee-saliva act upon sugar outside the body in a similar way?

From all these considerations I came to the conclusion that we had in honey a constituent capable of acting upon sugar outside the hive and changing it into "digestible sugar." This constituent is bee-saliva, or to designate it more accurately, honey-ferment.

Next let us consider diabetes and the pancreas.

In diabetes we have in reality a mixture of diseases. The form due to cancer, of course, cannot be cured except by the knife. It is the medical forms of these diseases that we are considering.

These forms are due to the disease of a gland known as the pancreas or sweetbread, and it is important to the subject in hand that you should understand the action of this gland. The gland pours its secretion into a U-shaped tube just beyond the stomach where almost all the digestion of our food takes place. Normally the pancreas here changes the sugars that we eat in the form of dextrose, into the form laevulose in which we absorb them. But when, as in diabetes, the pancreas fails to secrete the necessary ferment and hence the sugar is absorbed in its unchanged condition and produces the characteristics of the disease.

This missing ferment is, however, the same in its action as bee-ferment; and there seems no reason why the latter should not be used instead of it.

There remains therefore the one problem of how we are to extract this ferment,—the bee-ferment. And it is here that my remoteness from a laboratory prevents me from pursuing the subject. Had I the means for testing my results I should first try precipitating it with alcohol and re-dissolving with water, but as I have not I must leave the investigation for the sceptical to disbelieve and the more open-minded to carry on for me.

Breezy Hill, Nassau,
Bahamas, W. I.

THE CONNECTICUT STATE MEETING.

The sixteenth annual meeting of the Connecticut Bee-Keepers' Association will be held Saturday, April 6, 1907 in room 50, State Capitol, Hartford. A long and varied programme has been arranged, and we expect that a number of able speakers will make addresses. All bee-keepers are urged to be present, and a special invitation is extended to the ladies. We hope to have a better honey display than heretofore, and trust that everyone will bring samples of anything of an apiarian nature.

Connecticut people, through the columns of the daily and weekly press have recently been enlightened by logical and forceful arguments as to the necessity of adequate foul-brood legislation, and whether our bill (now before the legislature) becomes a law or not, it is apparent that the honey industry of the State is looking up, and matters apiarian are in a most encouraging stage of progress.

Knowledge is still power in the world, and our Association stands for all that is vital, sane and progressive in the art of bee-keeping. All of the officers give their services free and are striving to put the Association on a more solid financial footing.

We want 500 new members. The membership fee is but 50 cents a year, which entitles one to a liberal discount on bee-supplies. Please remit that amount to the undersigned without delay, and come to the annual meeting without fail.

J. Arthur Smith, Secy.
Box 38, Hartford, Conn.

THE
American Bee-Keeper
PUBLISHED MONTHLY

Official organ of the New York State Association of Bee-Keepers' Societies.

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HOW TO ADDRESS.

The home office of the American Bee-Keeper is at Falconer, N. Y., and all matters relating to subscriptions, discontinuances, changes of address, advertising or other business should invariably be addressed to the Falconer, N. Y. office.

Matters relating to the editorial department—Manuscripts, photographs, or correspondence in any way referring to articles that have been or are to be published, should be addressed to The American Bee-Keeper, Fort Pierce, Florida.

DISCONTINUANCES.

The American Bee-Keeper will be sent continuously until it is ordered stopped and arrearages, if any, are paid. Those who wish the paper discontinued at the expiration of the time for which they have paid, have only to request that it be done, and no copies will be sent thereafter.

SUBSCRIPTION RECEIPTS.

We do not acknowledge receipt of subscriptions. Your receipt of the journal is evidence of your subscription having been entered.

When the time expires for which The Bee-Keeper has been paid, it will be mailed in a red wrapper, and the red wrapper will continue until the subscription is paid up. Subscribers will confer a favor by carefully noting the color of the wrappar used, and when the red one appears, by promptly sending renewal.

Gleanings is introducing a department on the plan of the "Bee-Keeping World." Someone has said that "imitation is the sincerest flattery." Who was that? (H.)

We wonder what will happen bye and bye to the producers of sugar-syrup-fed honey? Remember the Pure Food Law. (M.)

If you want to be in the fore front of bee-keeping ranks you must needs read the American Bee-Keeper for in it you will find matter that will not appear elsewhere until long after. The copy which we have on hand is most valuable to the man who is in the business for cold hard dollars and is equally interesting to those who are keeping bees for recreation. (M.)

We note some comment to the effect that the Pure Food Law is responsible for the rise in price of honey. The opinion of many retailers is that it has merely been put up in harmony with almost every other food and that the law had nothing to do with it. The dealers are no simpletons, they are in business for what they can make and they are prompt to avail themselves of any excuse to increase profits. (M.)

"If there is drone comb in the supers the queen is almost sure to go up" says Dr. C. C. Miller. I would like to ask him how she knows it is there? To help him answer I will whisper to him that the queen in the course of her rambles visits in the course of a few days pretty nearly every nook and corner of the hive. (M.)

Our old friend "Pat," who used to contribute amusing stuff to these columns and who went to Cuba several years ago, expecting that he would have to stop extracting in the middle of the season and ship the first half of the crop in order to avoid swamping the island under its burden of honey, must have decided upon a change of plans. A postal card just received says: "If I will be able to sell my bees, will do it and go back to the States." (H.)

The American Bee-Keeper strives to give its readers the whole of the facts about matters of importance to their industry and welfare. In this connection we beg to ask you to compare the full record of vital matters considered at the meeting of the Associated Societies of the State of New York, as given in February issue with the meagre and misleading reports or entire absence of report from the columns of other papers on which bee-keepers are asked to depend. (M.)

A recent letter touching on the affairs of the Pennsylvania State Bee-Keeper's Society has this to say: "It was agreed in our society that the supply dealers were entitled to as much consideration as any other persons, especially as they are using their efforts in a very commendable direction to build up and maintain societies for bee-keepers, and in procuring and disseminating information, which is necessary for the progress of this subject." If the bee-keepers cannot build up and maintain their own societies they deserve to be owned body and soul by outsiders. (M.)

A meeting of the Massachusetts Society of Bee-Keepers was held in Boston, February 12th, in the evening. This was the first evening meeting which the society has held and it was expected that it would accommodate many who find it difficult or impossible to attend in the day time. Only about 25 persons were present and it is doubtful if the meeting in the evenings will prove advisable. Some general discussions were held, questions answered, etc. At the next meeting, announcement of which will be given in due time, the committee on the new constitution will report, also plans will be considered for future work. (M.)

A NEW BEE JOURNAL.

Mr. Henry E. Horn, Riverside, California, is the publisher of a new 16-page bee-paper that began life in March. It is called "The Far-Western Bee-Keeper" and is very neatly gotten up.

Our "far-western" friends have tried long enough and hard enough to establish a bee journal of their own, to succeed, and we trust that this one may win out. Mr. Horn is one of the well-informed apiarists of the Pacific Slope, and is quite a forceful writer. The American Bee-Keeper wishes success to its young contemporary. (H.)

STATE AID IN TENNESSEE.

Each winter a well-attended course in apiculture is given at the University of Tennessee, Knoxville, in charge of Assistant State Zoologist, G. M. Bentley. Prof. Bentley is intensely interested in the work and is doing much to disseminate apiarian knowledge and to collect data relative to the industry in the state. (H.)

QUEENS FOR 1907.

If any reader of The Bee-Keeper contemplates the purchase of queens this year he has only to turn to the Queen-Breeders' Directory in the advertising pages of this paper. There he will find catalogued reliable breeders of all races and strains. The list is convenient and very complete.

When writing these advertisers please do not fail to say that you saw the advertisement in the American Bee-Keeper.

If there are any reliable breeders of queens not already represented in the Directory, they should not delay making application for space. The season for busines is at hand. (H.)

APIS DORSATA.

The following about the giant bee of India, Apis dorsata, is taken from the Entomologist's Record of London, Eng., and was written by Mr. R. Hamlyn-Harris, R. F. S. etc. We have condensed the matter, giving only the most interesting points.

The reports of the India Office agreed that A. dorsata, mentioned generally under native names, could not be domesticated on account of its intractable character. The chief points noted are: 1. It is said to be exceedingly vicious, often attacking man or beast on the smallest provocation. 2. It preserves the same habits and appearance where ever its habitat. 3. It has never been known to build its nest under shelter but mostly on isolated trees or overhanging rocks. 4. After the honey season the bees will desert their nests and often travel for long periods and great distances, even crossing such mountain chains as the Nilgherris in their course. 5. They build single combs. 6. And approach them from north, south, east or west. 7. They rarely remain in one locality for more than three weeks, departing as flowers become scarcer.

Near Darjeeling (Eastern Himalayas) they are called Cargoos and are an object of fear and dislike. They are said to travel as much as 100 miles before settling. Are inclined to fly somewhat clumsily and to visit flowers somewhat listlessly. Their value for crossing with A. millifica is questioned because no crosses have been found between A. dorsata and A. indica, and similar bees in India. One writer is quoted as having had seven hives or colonies fed and fixed for the winter but that they left in the spring, leaving by twenties and thirties, each bunch having a queen. Clipping queens proved fatal. (M.)

BOOMING BEE CULTURE.

A lot of tommyrot is going the rounds of the press on bee-keeping as a business, its profits, how to start, etc., etc. One writer who belches words as Vesuvius does smoke, points to the wonderful success of a certain man but he omitted to state that the final balance sheet showed him to be bankrupt to the tune of many thousands of dollars. It is almost needless to state that the articles are used in a manner that will entice people to enter the business or induce those already keeping bees to increase their present plant—for the benefit of the supply men, of course.

If a man feels that he must make bee-keeping a business let him go learn it from the bottom up just as he would any other business, by working for somebody already in it. To be sure some persons can teach themselves but that is an exceedingly slow and costly process. (M).

JUGGLING THE TRADE.

In some quarters we note an increased bid price for wax. Now watch and see if you shortly find an increase in the price of foundation and at the same time bear in mind that foundation makers do not wait until the eleventh hour to make their foundation.

The bid price to which we refer is thirty cents delivered at the purchasers place of business. At the time the above bid was published the price in

New York for "Crude Wax" (not refined, containing more or less foreign matter,) was thirty-three and one-half cents to thirty-four and one-half cents, while "Refined Wax" was quoted at thirty-six cents to thirty-seven cents, all prices f. o. b. New York. Much of the wax furnished by bee-keepers here will class as "Refined." Where the lots are small or are shipped from a great distance the freight charges would naturally fall on the seller, but not otherwise. Not much love wasted on the dear bee-keeper in a thirty-cent bid for a thirty-seven cent product. (M.)

BEE CULTURE IN AFRICA.

Mr. F. W. Drummond, a Bee-Keeper subscriber of South Africa, writes:

"The bee-keeping industry in Natal is not worth bothering with. The people in Durban are not enterprising enough. I got 21 sections of honey, well filled, and had them put up in American cases with my name printed on the case, and tried all over town to dispose of them. The only encouragement I got was: 'Sorry, but there is no demand for it.' If this is all I can get after expending twenty pounds on bees and hives, I have given it up as a bad debt. The people here want one to give them the honey, or else sell it to them at two cents per section."

Mr. Drummond writes that he contemplates coming to either Canada or the United States to locate. While this journal would hesitate to offer encouragement to anyone who aspires to the acquisition of wealth through the production of honey, in coming to America, there are, doubtless, opportunities in other lines, for money-making, while apiarian conditions are not so gloomy as Mr. Drummond has painted the situation in his present location. (H.)

INDUSTRIOUS LAZINESS.

This is the way Mr. D. M. Macdonald, of Scotland, goes for our associate editor, in the British Bee Journal:

"Bees Ridiculously Lazy"? — Oh, Mr. Arthur C. Miller! To punish you I won't quote another word of your "ridiculous" contention on page 2. There! Here are some classic quotations for the other side:—"In their labour at home and abroad bees are so admirable that they may be a pattern to men. Their labour never ceaseth" (Butler). "As honey excels all other things in sweetness, so doth bees all other insects in wisdom and industry" (Rusden). "A bee is a magnum in parvo, a little in quantity, but much in work" (Purchas). "The bee of all insects is certainly the most indefatigable in its labour" (Warder). "Bees are of all creatures the most laborious" (Levett), "Excellent labourers" (Lawson). "Bees are the most industrious of all our animals, never at rest while they have matter to work upon" (Worlidge). I could add indefinitely to these extracts, but refrain as I may be told this is "ancient history." True; but the new is not always the true, and the true is not always the new. These old bee-masters, over 300 years ago, learned a truth which, apparently, some bee-masters of the present day are trying to unlearn.

While Mr. Miller is, obviously, abundantly able to take good care of himself in this discussion, it is evident that his premises are frequently misunderstood by his critics. While Mr. Miller would probably concede that a colony of bees, collectively, would serve well to typify industry, yet the prevailing idea that each individual bee is constantly active during the working season is an error. If a gang of 60,000 laborers were employed on a job of excavating, they would move "an awful pile of dirt" in a day—not because of the extraordinary activity of each individual, for there would surely be lots of "loafing" done by some, and none of the gang might be particularly spry; but the great number employed would, by shear numbers, overshadow the great amount of laziness and shirking that is bound to be present in such an aggregation of men. (H.)

THE MASSACHUSETTS SOCIETY.

The Worcester County (Mass.) Bee-Keeper Society held its second annual Institute at the rooms of the Worcester Horticultural Society in Worcester, Februay 16th. The meetings were under the auspices of the Massachusetts State Board of Agriculture, which body co-operates with and intelligently assists all such organizations which are conducted for the benfit and in the interests of the farmers. Mr. J.Ellsworth, secretary of the board, presided.

The first speaker of the morning session was Mr. Geo. W. Adams, his topic being the Mind of the Bee. He handled the subject in a most entertaining way and kept the close attention of his audience by his array of facts and by his witty and amusing illustrations. While the subject was necessarily more or less speculative the speaker nevertheless was able to show its bearing on practical bee culture.

Dr. Porter, of Clark University, was the next speaker and he treated the same subject from the standpoint of the scientist, pointed out some of the common errors of deductions from appearances and told how the scientist tried to avoid them. He very distinctly explained the relations between the scientist in his laboratory and the practical bread winner among his bees.

Following Dr. Porter there was a general discussion until noon when the meeting adjourned for the banquet. About 100 persons partook of this. After the dinner and until the assembly at 2 o'clock there was a period of chatting and discussions, so dear and often so profitable to the bee enthusiasts.

The first speaker of the afternoon was Dr. Kuhlmann, of Clark University, who spoke on Idleness among Bees. He held his audience enthralled to the end and when he was through they were quite willing to acknowledge that the bee as an individual was anything but a model of industry. Dr. Kuhlmann devoted a long period of time and much painstaking labor to the gathering of the facts on which he based his conclusions.

Mrs. Richardson, secretary of the Massachusetts Society of Bee-Keepers, told of her trials in getting a start in apiculture and gave her hearers frequent occasion for merriment. Her remarks were the more entertaining in that she had surmounted the difficulties and has made a financial success of bee-keeping.

Mr. Goodell, of Worcester, a member of the society, spoke at some length on the Sense Organs of Bees. He was followed by Mr. A. C. Miller of Providence, R. I., who told of the Conditions Within the Hives.

At an early date we will give to our readers several of these addresses in full.

As has been before mentioned here, the Worcester society is wonderfully wide awake and progressive and its members freely admit that no small part of their progress as a society and their advance as bee-keepers is due to the co-operation of the scientist and the plain bee-keeper. The credit for this belongs to many of its members but to its hard working and efficient President, Mr. Burton Gates, belongs no small share of the praise.

OUR COZY CORNER

BY HARRY E. HILL

The illustrations in this issue are so completely explained in the text as to require no comment here.

The secretary of the Connecticut State Association writes: "I enjoy reading your journal very much indeed, and wish it success."

Mr. John M. Davis, the extensive breeder of "Tennessee Queens," at Spring Hill, Tenn., wrote on March 20th: "Bees are farther advanced than I have ever seen them at this season."

Many letters reaching this office are addressed to the "American Bee Journal," Fort Pierce, Fla. This is an error that our patrons should carefully avoid, especially when writing to advertisers. The confusion of names is an injustice to two periodicals. Say, "American Bee-Keeper," and say it plain.

Mr. E. L. King, George's Plain, Jamaica, writes: I have written several letters to the Dixie Camera Co., of Atlanta, Ga., as I want to get Dixie developing paper, but letters are returned unclaimed. Can you give me any information in regard to this firm? Ans.—The firm has been out of business for several years. "Dixie" paper was simply another name for Kruxo, it being put up under the Dixie label for this firm. You will find Kruxo advertised in our columns.

"THE BEST OF ALL BEE JOURNALS."

While the American Bee-Keeper is undoubtedly the most popular of all apiarian journals throughout the East and New England states, it is also evidently as thoroughly read in foreign countries as any other. Mr. Adrian Getaz says it is more frequently quoted in France than any other bee-paper. We have recently had some interesting correspondence with individual subscribers and associations of the west, showing that it is rapidly gaining ground there among honey producers, as well.

The following from a lady in Texas, indicates the prevailing spirit of most of those who have favored us with expressions of their opinion:

"In response to your call in the February number of The Bee-Keeper, I contribute my mite, trusting that, if printed, it may interest some of the readers of your best of all bee journals. Like your Connecticut subscriber, I read it from end to end, and could part with almost any magazine or journal we take rather than with the American Bee-Keeper; for, besides interesting, it has helped me so much."

This lady has sent us lists of bee-keepers' names, and thus helped us to introduce it into new homes. We are truly grateful for the kind interest of such friends, and each one added to the list of active workers enables us to improve the journal.

"GREELENARIAN" PENMANSHIP.

"Just turn to page — of The Bee-Keeper for March, and see what the types make me say," indignantly wrote a correspondent the other day. We turned to the page, and turned also to the copy, and decided that the editor, the compositor and the proof-reader were all really entitled to much credit for the way the manuscript had been handled.

If correspondents are particular to have their writings appear correctly in print, care should be taken in their preparation to the extent, at least, of legibility.

Some very strange and amusing things sometimes occur as a result of carelessness in writing. Horace Greeley used to get into all kinds of muddles by this trait of carelessly writing. As an example of this, the following correspondence is said to have taken place between the immortal Greeley and a western lecture bureau:

Dear Sir,—I am overworked and growing old. I shall be sixty next February 3. On the whole, it seems I must decline to lecture henceforth, except in this immediate vicinity, if I do at all. I cannot promise to visit Illinois on that errand—certainly not now. Yours, Horace Greeley.
M. B. Castle, Sandwich, Ill.

And here is how the lecture committee read it:

Sandwich, Ill., May 12.

Horace Greeley, New York Tribune:

Dear Sir,—Your acceptance to lecture before our association next winter came to hand this morning. Your penmanship not being the plainest, it took some time to translate it; but we succeeded, and would say your time, "third of February," and terms, "sixty dollars," are perfectly satisfactory. As you suggest, we may be able to get you other engagements in this immediate vicinity. If so, we will advise you. Yours respectfully,

M. B. Castle.

Mr. Thos Chantry, president of the "Western Honey Producers," Sioux City, Ia., wrote, March 22, that he had his trunk packed for the editor's old stamping ground near Colton, California, and that prospects were favorable for a good honey crop in Southern California this season. Mr. Chantry has sold about two carloads of honey in Sioux City this winter. He is a "tireless toiler," and deserves the success that he is achieving.

One of California's extensive apiarists, from whom we had heard nothing for a year or more, expresses his sentiments, under date of March 20th, thus: "After reading all the bee journals for years, the American Bee-Keeper seems nearer to the plain bee-man than any of the others. I admire the stand you are taking."

Mr. Joseph Braun, of Santo Domingo, March 8, wrote: "Bees are doing well now. The past two months have given a good surplus of an excellent flavored and thick honey."

PICTURE No. 11.

Chatsworth, Cal., Feb 16, 1907.

Dear Editor:—The picture is of my extractor-house and apiary cook-house. The shop is beyond the hill. These hives are of overflow swarms. The tank among the hives is like I use to store honey in. I have 50 of them, 40 of which are at present filled with honey. They hold 600 pounds each and are constructed of a single sheet of 30x96 galvanized iron, waxed inside and painted outside. I usually keep that amount of honey for off years and to always have the cup right side up rain or no rain.

C. W. Dayton.

MEETING OF ST. LAWRENCE AND JEFFERSON COUNTIES, NEW YORK.

Black River, N. Y., Mch. 1, 1907.

The St. Lawrence and Jefferson Counties' Bee-Keepers' Association held one of the best meetings they have ever had at Gouverneur, N. Y., Dec. 14th and 15th, 1906. One reason why this meeting was such a success was that we had four state foul brood inspectors with us, namely,—Chas. Stewart, W. D. Wright, Mortimer Stevens and N. D. West, the noted inventor of the queen cell protector. The different diseases of bees were very thoroughly explained. It was a very enthusiastic meeting, and we are all looking forward to our next convention.

Geo. B.Howe.

The American Bee-Keeper Three Full Years $1.00. To New Subscribers, Three Full Years for Ninety Cents. Is that Cheap Enough?

HONEY AND BEESWAX MARKETS.

(Dealers' Selling Prices.)

Denver, March 15—The supply of comb honey is very light, especially in the lighter grades. The demand is good. We quote our market today as follows: No. 1 white per case of 24 sections, $3.20; No. 1 light amber, $3; No. 2, $2.50; to $2.80. Extracted, 8 to 9c for fancy white; 7 1-2 to 8c for light amber. Beeswax 27 to 29c delivered here. Colorado Honey Producers' Association.

Kansas City, Mo., March 11—There is scarcely any extracted honey in the market. The supply of comb is fair, with fair demand. We quote our market today as follows: No. 1 comb, $3.00 to $3.25.; No. 2, $2.50 to $2.75; extracted, 8 to 10c.; Beeswax, 27c. C. C. Clemmons & Co.

Cincinnati, March 11—There is very little demand for extracted honey at this writing, owing to the unsettled weather at this time of the year. However, we are looking forward, with interest, to a revival of trade, as soon as the warm spring days are here. Sell amber extracted honey in barrels at 6 1-4c. to 7 1-2c, the price depending upon the quantity purchased. Fancy table honey in crates of 2 60 lb. cans each, at 8c, to 9c. There is little demand for comb honey owing to the lateness of the season. We are now paying 32c. cash, or 35c. in trade, delivered here for choice yellow beeswax. The Fred W. Muth Co.

Milwaukee, March 7—The demand for honey is good for white, with supply light. Fancy white honey only is wanted here; Dark, slow sale. We quote our market today: Comb, 16 to 17c.; Extracted, 8 to 9c.; Beeswax 25 to 28c. J. C. Offerman & Co.

Worcester, Mass., March 9—Stock is nearly all closed out, the supply being not quite equal to the demand. Demand good. We quote, comb: 16 to 18c. W. H. Blodgett & Co.

Cent-a-Word Column.

DO NOT burn your refuse from Wax Extractor. Send it to me and get your cash. Archie L. Coggshall, Groton, N. Y. tf

AGENTS WANTED—To sell advertising novelties, good commission allowed. Send for catalogue and terms. American Manufacturing Concern, Falconer, N. Y.

FOR SALE—45 colonies of bees, excellent strain, no disease, several hundred hives, foundation mill, dipping tank, Cowan honey extractor and numerous other appliances. Located in Florida. Cheap for cash. Address, S. B. C. Care American Bee-Keeper, Fort Pierce, Fla.

INCREASE is a hadsome little book telling how to form new colonies without breaking working stocks. A simple, sure, satisfactory plan, 25c. Baby Nuclei tells how to mate many queens from sections with a mere handful of bees; 42 pages, 20 pictures, 50c. Cell Getting tells how to save labor in rearing queens, 50 cents. Queen rearing outfits. Golden all-over and Caucasian Queens. Circulars free. E. L. PRATT, Swarthmore, Pa.

WANTED—A small homestead nicely situated for bees and small fruits with plenty of good water. W. W. McNeal, Wheelersburg, Ohio.

WANTED.—No. 1 white and amber and buckwheat extracted honey in 60 lb. cans or barrels. Send sample and quote lowest price delivered in Preston. M. V. Facey, Preston, Fillmore county, Minn.

HONEY DEALERS.

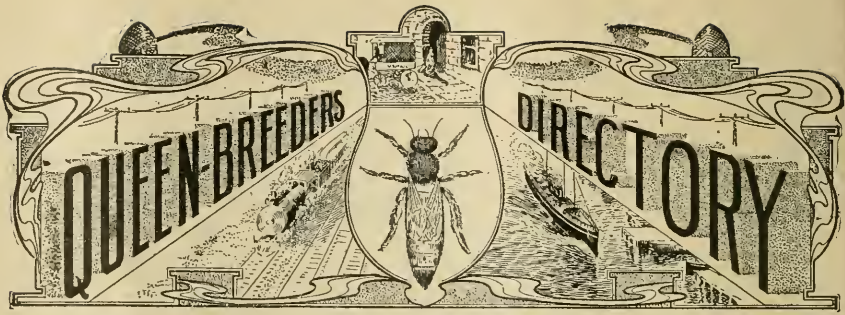
WE are always in the market for extracted honey, as we sell unlimited quantities. Send us a sample and your best price delivered here. The Fred W. Muth Co., 51 Walnut St., Cincinnati, O. 11-6

WANTED

The American Bee-Keeper wants an agent in every city, town and village of every English-speaking country in the world. To our representatives everywhere we pay cash for available matter for publication, and liberal cash commissions on all subscribers secured.

AMERICAN BEE-KEEPER

Falconer, N. Y.



ONE-HALF INCH SPACE ONE YEAR ON THIS PAGE, $3.00

THE FRED W. MUTH CO., 51 Walnut St., Cincinnati, Ohio. Standard Bred Red Clover Three- banded Queens, Golden Italians and Carniolans. Safe arrival guarantee. Send for circulars.

SWARTHMORE APIARIES, SWARTHMORE, PA.—Our bees and queens are the brightest Italians procurable. Satisfaction guaranteed. We are breeding the Caucasians absolutely pure from direct imported stock.

W. W. CARY & SON, LYONSVILLE, MASS.—Breeders of choice Italian bees and queens. Imported Leather and Root's Red Clover strains. Catalogue and price list FREE.

MOORE'S LONG-TONGUED STRAIN of Italians become more and more popular each year. Those who have tested them know why. Descriptive circular free to all. Write J. P. Moore, L. Box 1, Morgan, KY.

BETTER THAN AN ISLAND—No other bees within five miles. All fast trains stop here. I consider the Banat Caucasian bees the best and gentlest in the World. One colony made 32 fancy sections of comb honey during September, seventy Italian colonies did not make a pound. Banat Caucasians bred here, other races in out yards. Banat Caucasian queen $3.00. Caucasian queen $1.50. Golden Italian 75 cts. Order now D. Collins, Ph. D., Emporium, Pa.

THE A. I. ROOT CO., Medina, O.—Breeders of Italian bees and queens.

QUALITY QUEENS are the best Italians yet. Send for circular. H. H. JEPSON, 182 Friend street, Boston, Mass.

MINNESOTA QUEENS—Try our northern breed queens. Three banded and Golden Italian queens,untested 75 cts.; tested $1.25, hardy and prolific. We want your orders and guarantee safe arrival and satisfaction. Orders booked now, Write for circulars to Mennie & Fenton, Pine Island, Minn.

W. J. DAVIS, 1st YOUNGSVILLE, PA. breeder of choice Italian Bees and Queens. Quality, not quantity, is my motto.

ITALIAN QUEENS AND BEES. E. E. Mott, Glenwood, Mich. Money Order office, Decatur, Mich. Jan. 8.

D. J. BLOCHER, PEARL CITY, ILL—Caucasian and Italian Queens reared in separate yards. Safe arrival of all stock guaranteed. Circulars and price list free.

JOHN M. DAVIS, SPRING HILL, TENN.—Has greatly enlarged and improved his queen-rearing facilities. Two unrelated Carniolans and a dark leather Italian lately imported. My own strains of three-band and golden; "Moore's" long-tongue; Doolittle's golden; all selects. Carniolans mated to Italian drones when desired, No disease. Circular free.

WE are now booking orders for Providence Queens for spring delivery. Cull & Williams, Providence, R. I.

HOOPER BROS.' Italian Queens reared in the West Indies are the most prolific and give the best results available any time of the year. Write at once for information to Kingston. Jamaca, B. W. I., Box 162 Nov 6

BUY YOUR QUEENS from the Red Clover Apiary. Bees guaranteed to work on red clover. Fine 3 and 5-banded untested Italian queens, 60 cts. Tested, 75 cts. If wanted before June 25, add 15 cts to above prices. J. L. Fajen, Alma, Mo. Dec. 7.

MY GOLDEN ITALIAN breeding queen produces bees that do not know enough to stay in the hive when it rains. They are hustlers. Caucasians, bred from an imported Queen. Queens mated in yards 6 miles apart. Satisfaction and safe arrival guaranteed. Both queens and supplies are A No. 1. Agents for The W. T. Falconer Mfg. Co's be supplies. J. R. Rambo, Collingdale, Pa.

IF YOU WANT BEES that winter best, build up early in the spring, the best comb-honey bees, Get my Improved Carniolan Queens, They do business, [Italians for those prefering them.] Catalogue free. W. W. CRIM, Pekin, Ind. Feb8

ITALIAN and Carniolan Queens. One and two-frame nuclei, untested either 3 or 5 banded, 75 cents each. Tested, $1.00 This includes Carniolans. One-frame nucleus 75 cents. Two-frame nucleus, $1.25. Write for particulars.
C. B. BANKSTON & CO., San Antonio, Texas.

QUEENS—NUCLEI!—By uniting the swarms from 1000 colonies the coming season I will sell queens and nuclei after March 1st at following prices: Queens, 25 cents each, $3.00 per Doz. Nuclei, with queen, 1 frame, $1.25; 2-frame, $1.50; 3-frame, $1.75. Address, R. M. Spencer, Nordhoff, California.

10 SOUVENIR POST CARDS.
Stunners, Comic, Korkers, no 2 alike, and our big magazine 1 year, 10c.
AMERICAN STORIES, Dept. H. D., Grand Rapids, Mich.

The Rietsche Press

Made of artificial stone. Practically indestructible, and giving entirely satisfactory results. Comb foundation made easily and quickly at less than half the cost of buying from the dealers. Price of Press for L. frame sheets, $2.00. Other sizes, 25 cents extra. Price of the Press making the foundation directly on the wired frames, $2.50, any size wanted.

ADRIAN GETAZ
KNOXVILLE, TENN.

KRUXO

The perfect developing paper for professional and amateur photographers.

Easiest to Use, Best in Results. Low in Price.

It's Easy to Make Pictures with KRUXO.

Write today for full information, to

KILBORN PHOTO PAPER CO.,
CEDAR RAPIDS, IOWA.

N. B.—The editor of The Bee-Keeper has used more than a thousand gross of Kruxo paper.

REAL ESTATE WANTED

For hundreds of CASH BUYERS, who advertise in THE U. S. REAL ESTATE JOURNAL and THE PROSPERITY MAKER, a unique, original, illustrated monthly for the Home, Real Estate, Business. For wide-awake buyers, sellers, agents, investors. A world wide circulation. Sample copy, 25c or $1.00 per year. Free advice. Write J. ALLEN STEPHENS, Publisher, 18 Willard Building, Muncie, Ind. Est. 1892.

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CAVEATS, TRADE MARKS, COPYRIGHTS AND DESIGNS.

Send your business direct to Washington, saves time, costs less, better service.

My office close to U. S. Patent Office. FREE preliminary examinations made. Atty's fee not due until patent is secured. PERSONAL ATTENTION GIVEN—19 YEARS ACTUAL EXPERIENCE. Book "How to obtain Patents," etc., sent free. Patents procured through E. G. Siggers receive special notice, without charge, in the

INVENTIVE AGE

illustrated monthly—Eleventh year—terms, $1. a year.

E. G. SIGGERS, 918 F St., N. W., WASHINGTON, D. C.

Our Special Premium Offer

We have been successful in closing a contract with the Diamond Point Pen Co., of New York, whereby for a limited time we can supply a guaranteed

$2.00 Gold Fountain Pen,

"DIAMOND POINT."

and the American Bee-Keeper one year for only 90c to every subscriber, old or new. The pen will be forwarded immediately upon receipt of the money. It is made of the best quality of hard rubber in four parts, and fitted with a guaranteed iridium pointed 14-k GOLD PEN. The "fountain" is throughout of the simplest construction and can not get out of order, overflow, or fail to supply ink to the nib.

"A FOUNTAIN PEN IS A NECESSITY OF THE 20TH CENTURY."

It dispenses with the inconvenient inkstand and is always ready for use.

"THE DIAMOND POINT" bears the manufacturer's guarantee that the pen is solid GOLD, 14-k fine. If it does not prove satisfactory in every way we will exchange it for another, or return the fifty cents additional upon return of the pen.

This is an unusual opportunity to secure, at a very low price, an article of superior quality that is coming to be essential to the comfort and convenience of every one. Remember this offer is for a short time only.

The American Bee-Keeper, Falconer, New York

TWO YEARS FOR $1.00

After a man succeeds in publishing a good journal, the next step is that of getting it into the hands of the people, of getting them to reading it, and becoming acquainted with its merits. This can be done by advertising, sending out sample copies, circulars, etc. All this costs money. I think I am safe in saying that, for every new subscriber I have received, I have paid $2.00 in advertising; hence, I have always said that a publisher of a good journal could afford to send his paper one year free for the sake of getting it into new hands. It would cost no more than other forms of advertising, and would be more effective; but, for obvious reasons, this plan could not be put into practice; but I am going to come as near to it as I can. I have between 200 and 300 complete sets of back numbers for the present year; and as long as the supply holds out I will send a complete set, and the rest of this year free, to any one who will send me $1.00 for the Review for 1907.

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SEPTEMBER.—Of all the articles in this year's Review I doubt if any one is more really helpful than the one in this issue by the editor, entitled "Conveniences in the production of Extracted Honey." It has several illustrations, and shows how to use bee-escapes without the back-aching work of lifting the hives by hand; how to make a honey-knife cut as "slick as a razor;" how to make an uncapping-can for ten cents; how to arrange a cheap automatic strainer, and run the honey directly into the cans; and how to arrange an electric bell, at a cost of 60 cts., that will ring when the can is full.

Instead of mentioning some of the special features for October, November, and December, let me use the space to say that one of the good things that will appear in the Review for 1907 will be a series of articles from E. D. Townsend, Michigan's foremost bee-keeper. All of his writings in the past have been fragmentary, a glimpse here and there, and they have been scattered here and there in different journals. Now he is going to write in a consecutive manner, starting at the beginning of the season and going through the year—just as though he were writing a book. It will give his system of management.

ADVANCED BEE CULTURE

This is a book of 230 pages, beautifully printed, bound, and illustrated, that discusses bee-keeping from a money point of view—shows how to make a pleasant and profitable business out of bee-keeping. Price $1.20; or, the REVIEW for 1907 (and all the back numcers of this year free) for only $2.00.

W. Z. HUTCHINSON, Flint, Mich.

Absolutely Free to New Subscribers!

To the first ONE HUNDRED New Subscribers to the AMERICAN BEE-KEEPER, at 50 cents a year, we will give each a Package of choice Vegetable and Flower Seeds, the retail value of which is $1.00. Send at once and secure one of these packages. Address,

AMERICAN BEE-KEEPER, Falconer, N. Y.

Old subscribers paying for two or more years in advance will also be entitled to one of these packages.

SEND NOW

OUR DISCOUNTS ON

BEE-SUPPLIES

Are still in effect. We furnish EVERYTHING needed in practical Bee-Culture, at lowest prices. We make the DOVETAILED; ALTERNATING and MASSIE HIVE, the best up-to-date Hive in existence, Have you seen it? Read our catalog.
Our HONEY-EXTRACTORS are not excelled for durability, fine workmanship, and practical utility. Have you seen our latest imimproved CHAMPION SMOKER? If not, you miss it until you get one.

Satisfaction guaranteed, or money back. Address,

KRETCHMER MFG. CO., Council Bluffs, Iowa

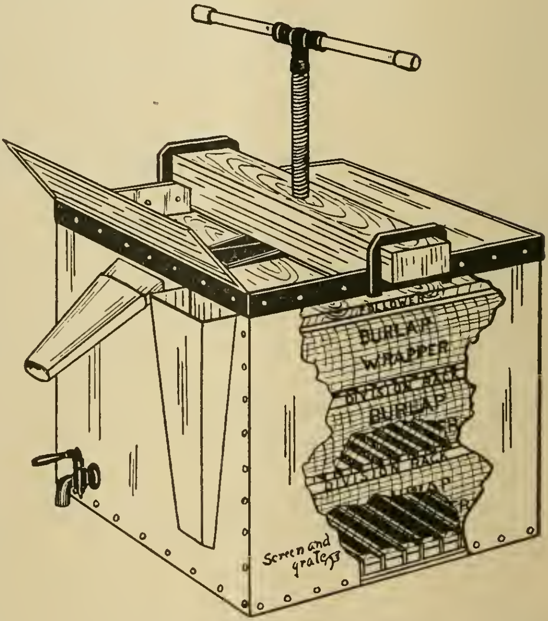
Muscatine Produce Co., Muscatine, Iowa.
Trester Supply Co., 103 S. 11th Street, Lincoln, Neb.

Aug. 7 Catalogs issued in English or German.

99 % of Your Wax Saved

BY MEANS OF THE

Hershiser Wax Press.



WE are offering to our customers this year for the first time the Hershiser Wax Press, a cut of which is here given. This wax press has just been invented and consequently hrs never before been offered for sale. The sale of it is entirely controlled by the G. B. Lewis Co., we having the exclusive rights. The Hershiser Wax Press is not only the best wax press ever put on the market. but it is an almost perfect device for extracting wax. We will guarantee it will extract within 1 per cent of all the wax contained in the slumgum placed in it, if properly operated. All the wax presses now in common use will necessarily leave in the slumgum a large amount of wax, the quantity varying from 8 to 25 per cent; in other words, the Hershiser Press is able to get about 7 per cent of wax out of slumgum after the very best of all other wax extractors has obtained the greatest possible amount of wax from it. The slumgum of the Solar Wax Extractor has even yielded more than 25 per cent wax after being run through the Hershiser Press. It is a combination of the pressure and hot water methods. Owing to the want of a good wax press it is startling to believe, but no less true, that hundreds of thousands of dollars worth of wax have been thrown away heretofore in the shape of good wax cast into refuse heaps. It can now be saved by using the Hershiser Press. Beekeepers owning only a few colonies would do well to combine in the purchase of a machine which would soon pay for itself. Those having between fifty or one hundred colonies can save the price of one in two seasons. Beekeepers having two hundred colonies or more can save several times over the cost of a machine in a single season. This press is very strongly made, being constructed to stand the greatest strain to which it can be put. If you are interested, be sure to send for the Hershiser Folder, giving further information and full description. It will be mailed free, on request to

G. B. LEWIS COMPANY,

Watertown, Wis., Sole Manufacturers, or to its Distributing Houses

DISTRIBUTING HOUSES.

ENGLAND—E. H. Taylor, Welwyn, Herts.
FRANCE—Raymond Gariel, Paris, 2 ter Quai de la Megisserie.
CUBA—C. B. Stevens & Co., Havana, 19 Oficios, C. B. Stevens & Co., Manzanillo.
CALIFORNIA—The Chas. H. Lilly Co., San Francisco, 141 Spear Street.
SOUTHERN CALIFORNIA—Paul Bachert, Lancaster, Doyle—Barnes Co., San Diego, Fallbrook Co-operative Ass'n, Fallbrook.
COLORADO—Colorado Honey Producers' Ass'n, Denver; Grand Junction Fruit Growers' Ass'n, Grand Junction; Robert Bailey, Montrose.
IOWA—Adam A. Clarke, Le Mars; Louis Hanssen's Sons, Davenport; W. J. McCarty, Emmetsburg.
LLINOIS — York Honey and Bee Supply Co., Chicago, 191 E Superior Street. Dadant & Sons, Hamilton.
INDIANA—The C. M. Scott Co., Indianapolis.
MICHIGAN—A. G. Woodman Co., Grand Rapids,
MINNESOTA—Wisconsin Lumber Co., Minneapolis, 432 Lumber Exchange.
MISSOURI—E. T. Abbott, St. Joseph.
OHIO—Norris & Anspach, Kenton.
OREGON—The Chas H. Lilly Co., Portland.
PENNSYLVANIA—Cleaver & Greene, Troy.
TEXAS—Southwestern Bee Co., San Antonio, 438 West Houston Street.
UTAH—Fred Foulger & Sons, Ogden.
WASHINGTON—The Chas. H. Lilly Co., Seattle.

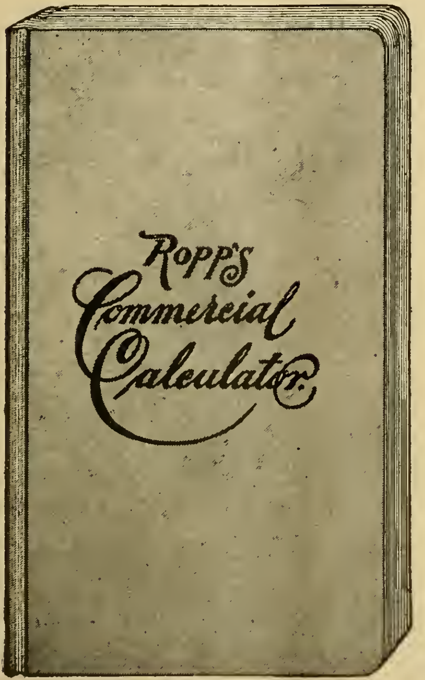
YOU NEED THIS BOOK

The publishers of the Agricultural Epitomist, Spencer, Indiana, (the only agricultural paper that is edited and printed on a farm) have made arrangements by which they can offer with each three years' subscription to their paper at 50 cents, a copy of

ROPP'S COMMERCIAL CALCULATOR

absolutely free, postage prepaid. You should not overlook this opportunity to secure one of the foremost farm monthlies in the country, together with this valuable book at the price of the paper alone.

WHAT THE CALCULATOR IS



Size 6¼x3¾ inches.

A READY CALCULATOR, BUSINESS ARITHMETIC and REFERENCE BOOK COMBINED.

This is unquestionably the most complete and convenient work on Figures for PRACTICAL USE ever published. It contains nearly all the Short Cuts known; hundreds of **Simple Rules and Original Methods** for "Easy and Rapid Calculation," and **Millions of Accurate Answers** to Business Examples and to Practical Problems.

It Sifts and Simplifies the whole science of Arithmetic, retaining only the **Cream** in a nutshell, as it were. Its Tables, Rules and Methods are extremely simple, eminently useful practical, and fully abreast with the age of steam and electricity.

Everyone who prefers to take the **Simplest** the **Shortest** and the **Easiest** way for doing his work should possess a copy of this useful and convenient Pocket Manual. It will enable everybody to become Proficient and Quick in Figures; and to many a young person it may prove to be a stepping stone to a successful business career.

IT WILL SHOW AT A GLANCE, WITHOUT THE USE OF PENCIL, PEN OR PAPER

The number of **bushels** and **pounds** in a load of Wheat, Corn, Rye, Oats, or Barley, and the **correct amount** for same at any price per bushel.

The **exact amount** for a lot of hogs or cattle, from 1 lb. to a carload, at any price per cwt.

The **correct amount** for a load of Hay, Straw, Coal or Coke, from 25 cents to $20.00 per ton.

The **correct amount** for articles sold by the Bushel, Pound, Yard or Dozen from ⅛c to $1.

The **exact wages** for any time, at various rates per month, per week and per day.

The **equivalent** of wheat in flour, when exchanging same, from 25 to 40 lbs, to the bushel..

The **only correct** Rule and Table for estimating the **exact contents** of logs of all sizes.

The **exact contents** of Lumber, Cisterns, Bins, Wagon Beds, Corn Cribs, Cord-wood and Carpenters', Plasterers' and Bricklayers' work.

The **exact interest** on any sum, for any time, at any practical rate per cent.

The **Day of the Week**, for any date in 300 years, besides hundreds of other very useful things.

It gives all the **Latest** and **Shortest** methods known, besides many published for the **first time**; viz: An Easy and Unerring process for "Adding Long Columns; "Short Cuts in Multiplication and Division. Problems in Fractions, Interest, Percentage, Mensuration, etc., are usually solved with less than **one-third** the figures and labor required by ordinary methods.

Handsomely and attractively bound it cloth, with round corners and just the right size to fit the pocket. A copy of this useful and practical work should be in the hands of every farmer mechanic, or business man.

FILL OUT THIS COUPON

Enclose 50 cents and mail at once to

Epitomint Publishing Co.
Dept. SPENCER, IND.

COUPON

EPITOMIST PUBLISHING CO., SPENCER, INDIANA.

Gentlemen:—Enclosed find 50 cents for which send the EPITOMIST for three years from date. Send me as a premium postpaid a copy of ROPP'S COMMERCIAL CALCULATOR.

Name ....

Address ....

AGENTS WANTED

in every town for our

WASHING MACHINES

You can double your money every time you sell one, and they sell easily. We have sold over 160,000 in the last 14 years. They are cheaper than ever. Catalogue free.

THE EMPIRE WASHER CO., Jamestown, New York

COMBINATION OFFER

The best Home and Fashion Magazine published for fifty cents a year is The

New Idea Woman's Magazine

It contains over 100 pages each month of Current Fashions, Economy Articles, Household Advice, Dressmaking and Millinery, Short Stories, etc., beautifully illustrated with half-tone and color plates.

By special arrangement with the publishers we make the following exceptional offer:

American Bee-Keeper -	regular price	**50c**
The New Idea Woman's Magazine -	regular price	**50c**
Both, one year, for - - - - - - -		**65c**

SAMPLES FREE

THE AMERICAN BEE=KEEPER

FALCONER, NEW YORK

NOW IS THE TIME TO ORDER YOUR BERRY BOXES AND CRATES, BEE-HIVES, SECTIONS, SHIPPING CASES, etc., for the coming season. By sending us a list of goods wanted we can save you money.

Sheboygan Fruit Box Co.,

tf Sheboygan, Wisconsin

ARE YOU LOOKING FOR A

HOME?

No farmer should think of buying land before seeing a copy ow The Farm and Real Estate Journal. It contains the largest list of lands for sale of any paper published in Iowa. It reaches 30,000 readers each issue, and is one of the best advertising mediums to reach the farmers and the homeseeker that you can advertise in . For 75c we will mail you the Journal for 1 year, or for 10c in silver or stamps we will send the Journal 2 months on trial. Address.

Farm and Real Estate

JOURNAL

TRAER, Tama County, IOWA.

Seedtime and Harvest

IN ITS 26th YEAR

Of interest to every member in the home.

3 Years for 50 cents

3 Months for 10 cents trial subscription if you mention The Bee-Keeper.

613-615 Center Street, SCRANTON, PA.

June 7

IF, IF, IF,

BINGHAM

HAS MADE ALL THE IMPROVEMENTS IN

Bee Smokers and Honey Knives

made in the last twenty years, undoubtedly he has made THE BEST ON EARTH

Smoke Engine, 4 inch stove, none too large, sent postpaid	$1.50
2 1-2-inch	.90
3 1-2-inch	1.10
2-inch	.70
3-inch	1.00
Little Wonder, 2-inch	.65
Knife	.80

T. F. BINGHAM

FAREWELL, MICH.

DITTMER'S

Comb Foundation

Why do thousands of Bee-Keepers prefer it to other makes?

Because the Bees like it Best and Accept it more readily.

Dittmer's Process is Dittmer's

It Stands on its **Own Name** and its **Own Foundation**, to which alone it owes its Reputation and Merits.

We are now ready to make Prices for next season.

For **Working Wax** for **Cash** and for full Line of Supplies.

WHOLESALE AND RETAIL.

Free Catalog and Samples.

GUS DITTMER, Augusta, Wis.

CYPRIAN

Golden Queens **Direct From**

CYPRUS

Please write to **MESSRS. GREGORY DERVISHIAN & BROTHERS, Nicosia, Cyprus,** for excellent **PROLIFIC MOTHER QUEENS** of gentle strain. Price of each queen mailed to U. S. America, and to Canada, $2.50 safe arrival guaranteed. To Australia, Ceylon, India, &c., &c. $3.00 safe arrival guaranteed. Send international money order.

HOMES

In Old Virginia

It is gradually brought to light that the Civil war has made great changes, freed the slaves, and in consequence has made the large land owners poor and finally freed the land from the original owners who would not sell until they were compelled to do so. There are some of the finest lands in the market at very low prices, lands that produce all kinds of crops, grasses, fruits, and berries; fine for stock. You find green truck patches, such as cabbage, turnips, lettuce, kale, spinach, etc., growing all the winter. The climate is the best all the year around to be found, not too cold not too warm. Good water. Healthy. Railroads running in every direction. If you desire to know all about Virginia send 10c. for three months subscription of the VIRGINIA FARMER to Farmer Co., Box 604, Emporia, Va.

MAPS

A VEST POCKET MAP OF YOUR STATE

New issue. These maps show all the Counties, in seven colors, all railroads, postoffices—and many towns not given in the postal guide—rivers, lakes and mountains, with index and population of counties, cities and towns. Census—it gives all official returns. We will send you postpaid any state map you wish for 25 Cents (silver.)

John W. Hann

WAUNETA, NEBRASKA

DANZENBAKER PRIZES

It is to be regretted that so many bee-keepers are satisfied to produce year after year a very ordinary grade of honey as regards its appearance, when by a little more care, and having more suitable fixtures, and by taking the honey from the hive at just the right time, a much larger percentage of "fancy" or "extra fancy" honey could be produced, which would sell at a much higher price. The experience of honey-merchants generally is that there is no difficulty in disposing of large stocks of fancy or extra fancy, even when the market is dull. It is the inferior grades that suffer most at these times. We believe, too, that bee-keepers would be very much better satisfied with their season's work if their best efforts were made to produce a really fine product. To increase further the interest in extra fancy honey, the following prizes are offered for honey produced in Danzenbaker hives during the year 1907, under the following conditions:

FIRST.—As above stated the honey must be produced in a Danzenbaker hive, either the present style or any Danzenbaker hive that has been put out within the last few years. These hives may be had of any dealer in bee-keepers' supplies in any part of the country.

SECOND.—For Classes 1 and 2 we require a shipment of approximately the amount stated, to be made by the bee-keeper direct to us at Medina. After the prizes have been awarded the honey entered for competition in Class 1 or 2 will be held subject to the instructions of the producer. We will sell it at a five per cent commission or we will ship it to any point direct by freight or express. There being good honey markets in our immediate vicinity as Columbus, Cincinnati, Cleveland, Buffalo, and Pittsburg, it can be disposed of without difficulty at good market prices, and the shipper will not have to lose a good market by shipping it here. Neither the honey awarded a prize nor that which obtained no prize is to be our property, but will be sold subject to the instructions of the producer who sends it to us. We are interested only in inspecting it to award the prizes.

THIRD.—For all honey submitted for prizes we must have a definite statement from the producer regarding the conditions under which it was produced, whether a light or heavy flow of honey, how the colony was handled, how many colonies in the yard, from what source produced, etc.

FOURTH.—For Classes 3, 4, and 5, we must, in addition to the above report have the signature of two witnesses certifying to the correctness of the report. If the party who sends us the report for the competition is well known to us we shall not require these witnesses. References may be given instead of the signature of witnesses if desired. All parties intending to compete for these prizes should send for blanks which we will furnish, on which the report may be made out.

FIFTH.—It will be noticed in the last three classes, three to five inclusive, that it is not at all necessary to send us the honey—all we require is a report.

SIXTH.—We reserve the right to limit the number of awards in each class, or to make no awards in a class if there are no satisfactory entries for the same.

SEVENTH.—No contestant will be awarded more than one prize in each class, but may make two entries if desired—one in Class 1 or 2, and another in Class 3, 4, or 5.

The classifications for the prizes are as follows:

Class 1.—For best shipment of 200 lbs. of comb honey in Danzenbaker hive.
Class 2.—For best case of comb honey in Danzenbaker sections.
Class 3.—For best report of yield from single colony in Dazenbaker hive.
Class 4.—For best report of yield from five colonies in Danzenbaker hives.
Class 5.—For best report of general results from use of Danzenbaker hive.

For each class there will be ten prizes as follows:

First.—$10.00.
Second.—$7.00.
Third.—$5.00.
Fourth.—$2.00.
Fifth to Tenth.—$1.00 each.

Five Classes.
Ten Prizes for each Class.
Fifty Prizes in all.

This is the time to decide to enter this competition. No matter where you live, whether in the United States or elsewhere, you can certainly find one class in which you can make an entry; and as there are ten prizes in each class we believe that no one will be greatly disappointed in the results unless it is ourselves, and we hope that we shall not be, but see a large number of entries. Even if you fail to get a prize, you will doubtless have increased the value of your own product by your efforts to produce some big results or an extra quality of honey.

The A. I. ROOT CO., Medina, Ohio

The American Bee Keeper

May
1907

Fort Pierce Fla. – Falconer, N.Y.

BEE HIVES
SECTIONS

EVERYTHING

That is used by bee-keepers can be procured of us as cheaply as anywhere, and we know OUR GOODS ARE SUPERIOR, both in material and workmanship, to those of any competitor. ONE TRIAL WILL CONVINCE YOU. That's all we ask. You will never buy of anyone else.

Our new illustrated catalogue and price list is now ready. Send for one on a postal card.

The Fred W. Muth Co., 51 Walnut Street, Cincinnati, Ohio, handle our line of goods.

THE
W. T. Falconer Manfg. Co.
JAMESTOWN, NEW YORK

Our New Catalog

If you have not received our New Catalog and Price List for 1907, send for one at once. IT WILL PAY YOU TO SEE IT before placing your orders for

BEE SUPPLIES

OUR GOODS ARE SUPERIOR IN QUALITY
THE PRICES ARE REASONABLY LOW

Everything we make is practical. We have been making Beekeepers' Supplies for over 25 years, and if EXPERIENCE and responsibility count for anything, WE OUGHT TO HAVE YOUR TRADE.

THE W. T. FALCONER MANUFACTURING COMPANY
JAMESTOWN, N. Y.

Following are a few of those who handle our goods in large quantities, and can supply you at factory prices :

FRED W. MUTH CO., 51 Walnut Street, Cincinnati, Ohio.
HUDSON SHAVER, Perch River, N. Y.
FRANK A. LACEY, 5 Madison avenue, Danbury, Conn.
CULL & WILLIAMS, 180 Washington street, Providence, R. I.
C. O. BEARD, Salina, Kansas.

TWO YEARS FOR $1.00

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JULY.—This issue has a beautiful full-page illustration of the Review apiary here at Flint (105 colonies), and the editor gives a resume of his work in this apiary for the first six months of the year—showing where he failed and why he succeeded.

AUGUST.—In this number the editor tells of "Reaping the Harvest in Northern Michigan," and gives pictures of the different apiaries, some at old abandoned lumber-camps, one with a tent for a honey-house, while the reading-matter has an actual flavor of the wild northern woods.

SEPTEMBER.—Of all the articles in this year's Review I doubt if any one is more really helpful than the one in this issue by the editor, entitled "Conveniences in the production of Extracted Honey." It has several illustrations, and shows how to use bee-escapes without the back-aching work of lifting the hives by hand; how to make a honey-knife cut as "slick as a razor;" how to make an uncapping-can for ten cents; how to arrange a cheap automatic strainer, and run the honey directly into the cans; and how to arrange an electric bell, at a cost of 60 cts., that will ring when the can is full.

Instead of mentioning some of the special features for October, November, and December, let me use the space to say that one of the good things that will appear in the Review for 1907 will be a series of articles from E. D. Townsend, Michigan's foremost bee-keeper. All of his writings in the past have been fragmentary, a glimpse here and there, and they have been scattered here and there in different journals. Now he is going to write in a consecutive manner, starting at the beginning of the season and going through the year—just as though he were writing a book. It will give his system of management.

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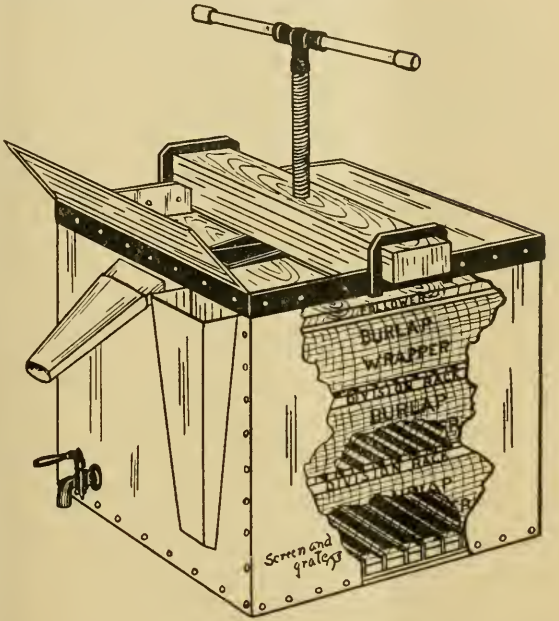

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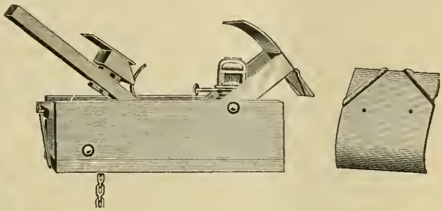

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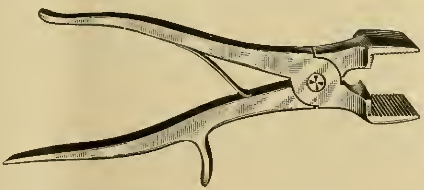

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Vol. XVII. MAY, 1907. No. 5.

WINTER CONDITIONS WITHIN THE HIVE.

A. C. MILLER.

"BEES TUCKED up nice and warm." What a safe and comforting feeling those words impart, and yet they are woefully misleading. A hive with thick chaff-packed walls and a thick cushion over the frames is but an ice house for the poor bees. Chaff hives were devised under the impression that they help the bees to keep warm by shutting out the cold. As regards a dwelling for man such devices are all right but they do not apply to a bee hive. Theories are very nice as a basis for experiments but it will not do to accept them as facts until fully tested and proved, but theories have been accepted as facts in regard to bee hives. Men with axes to grind or enthusiasts with a hobby have from time to time exploited some new hive as the bestest-best and the only "sure thing" for profit—for the seller any way. The relation of a few facts may help to clear away some of the mystery about hives, save dollars for bee-keepers and incidentally deprive the manufacturers of a few channels of profit.

In the winter bees in any hive keep the temperature within their cluster between 64 and 74 degrees, Farenheit, rarely going below 60 degrees or up to 80 degrees. But outside of the cluster the temperature is nearly or quite the same as that outside of the hive. Cluster temperature varies about as follows: From about 2 p. m. to about 9 a. m.—period of quiesence—the average is 66 degrees F. About 9 to 10 a. m. the temperature begins to rise until it reaches 70 degrees to 74 degrees. If honey is poured in or if sealed honey is broken open at such time, the temperature will rise rapidly even to 80 degrees or more and remain so until all free honey is taken up and disposed of. I have seen 80 degrees maintained for 24 hours under such conditions. The speed of the rise in temperature when stores are broken open is astonishing, 6 to 10 degrees rise in as many minutes having been noted. The maximum cluster temperature is generally reached about 11 a. m. By 2 p. m. it usually reaches the minimum average and stays with almost no variation until the next day. These temperatures are quite independent of the outer air.

The temperature within the hive and outside the cluster varies as follows:

When the air is still—no wind—the temperature is sometimes 2 to 4 degrees higher than outside of the hive, provided the outer air has for some hours kept at a level degree. But if the wind is blowing then the inner temperature is the same as the outer. In single walled, unprotected hives the temperature follows closely that of the outer air and quite as rapidly when the weather is windy. In chaff hives, particularly when well made with protected floors and small entrances, the temperature follows the outer temperature slowly. A zero night will give a zero inside the hive by morning, and a few hours of warm sunshine afterwards will make scarcely any impression on the inside temperature, even though the outer rises 20 degrees to 30 degrees.

In single-walled hives protected with black building-paper the temperature during the night or on a cloudy day, pretty closely follows the outer air, but on a sunny day even though windy —unless directly into the entrance—the inner air will warm rapidly, reaching many degrees above the outside temperature. The altitude of the sun and the direction of the wind have much to do with the variations within such hives.

Within certain limits the hive temperatures have no relation to cluster temperatures. If the bees are in a state of perfect health the hive temperature may rise to a level with the cluster temperature without the cluster showing any signs of breaking. But during the time of day when the cluster temperature rises, a high hive temperature induces greater activity. I should perhaps state here that during the rising and maximum cluster temperature very little movement of the bees is perceptible unless the hive temperature is high, say about 50. With healthy bees in a dry hive a temperature within of 60 degrees as a rule does not induce the bees to fly unless the outer air is 40 or more. Sometimes a few bees will venture out when the outer air is even as low as 20 degrees, but they fly only a foot or so and return quickly.

The foregoing somewhat fragmentary notes, I think, will shed some light on the complex problem of wintering. Incidentally they bear rather heavily on chaff hives. Reports of success with chaff hives and of failure with unprotected ones are plenty. What is the explanation? It is this: In the spring, when brood has begun to increase, the dense cluster becomes less dense and soon "breaks," then the hive temperature is much nearer the cluster temperature. It is right here that chaff protection begins to be of value and not before. Then the small entrance is a help and not a harm. But a single-walled hive well wrapped in black building paper and with the entrance contracted to an inch in width will do quite as well as the chaff hive and far better if the latter has become damp during the winter, as so many of them do. Furthermore, the paper-covered hive is much less expensive. But the wrapping method is not convenient in later manipulations and an equally as effective and more convenient way will be found in making a telescope cover of some firm and heavy grade of paper like the "Paroid."

"Air-spaced" hives are quite as effective as chaff hives and much less cumbersome and much cheaper. If painted a dark color they then possess much the same advantages of the paper-covered hives. But dark colored hives must be shaded in hot weather.

The next place in which the protected hive has an advantage is in the production of comb honey. Some parts of the country are blessed with many cool nights and often cool days during the honey season and at such times protection to the hive will readily pay for itself many times over. While such nights are delightful to mankind they are not the best for the bees.

Regarding the temperatures quoted above and the hours of the periods of activity, I wish to particularly state that they should not be considered as absolute or invariable, for the observations while numerous and extending over a considerable time are not yet extensive enough to be termed scientifically accurate. However, they are complete enough to warrant my making general deductions and I believe those deductions are worthy the serious consideration of bee masters.

Providence, R. I., Feb. 25, 1907.

SWARMS AND SWARM DECOYS.

C. W. DAYTON.

BY MY plan of managing swarms several birds are killed with a single stone. Other plans require the queen to be hunted out. In the swarming season that is a tedious job. Thirty queens a day is a good day's work. But if they are allowed to swarm naturally they bring their queens out of the hives themselves and may be caused to alight in one cluster, in which condition the bees can be run through a sheet of perforated zinc into one large box, leaving their queens behind, in a separate apartment. Thus the whole day's labor is reduced to a few minutes of easy work.

In dequeening by this natural swarming there is no loss of eggs and brood. This saving of the brood is the salient feature of the Alexander plan. But the Alexander plan involves the long search for the queen and the building of an unprofitable set of brood combs. So does "shook swarming."

My colonies are requeened by cells obtained from the colonies which swarm first. Those choice cells which are prepared by the bees and eggs laid in them by the queen. I save no cells from the later swarming colonies, because the latest to swarm are the poorest stock. It takes a heavier honey flow to make a poor colony swarm, but a very light flow of honey to cause a good colony to swarm, as the amount of honey coming into the hive is about the same in the case of the different colonies. Thus we are able to distinguish where our best stock is and improve the present grade by requeening from the best. It is only necessary to keep a record of the "swarmed" colonies and insert the cells at the proper time. New queens obtained in this way do not cost ten cents each. What makes queens worth one dollar is the artificial rearing of cells and forming of nuclei, feeding, propagation of drones, advertising, uncertainty of demand, watching the mail, fussing with shipping cages, etc.

DECOY HIVES.

In customary practice nearly all apiarists arrange the colonies so as to face as differently as possible to cause the swarms to settle distinct from one another. If there are clumps of bushes, or trees, or buildings, they are set about these objects, facing outward. When a swarm first issues it seeks a somewhat open space where the bees fly back and forth, in circular fashion until the last of the swarm is out of the hive. Then they may rise up or drift away to other parts of the apiary yard. But as they fly they gather more compactly together. The bees sally forward and circle back again toward the rear of the flying swarm. Then they circle forward again extending the circles farther than before. There is a difference in the sound, or, pitch of sound, at the front of the flying swarm from that at the rear. One is quick and sonorous, the other, slow and dull. The same bees which make one variety of sound make the other, according to what part of the swarm they are situated in. It requires an amount of motive force if not considerable judgment to produce sound of a particular kind in one spot and restrain it in another.

By my swarm system I aim to have the swarms settle together as much as possible. Therefore the hives are set around the outside facing a central open space and in the center of the open space is where I arrange my swarm decoy, or "settling seat," as the Frenchmen term it. I use live queens —the real attracting objects—an old queen and a virgin, or even several of each. Queens are plentiful at that season, being the time when I destroy the old ones for the substitution of new, and as for virgins, I find from four to a dozen in every hive that casts a second swarm. Then they are reared by artificial methods also. For the decoy real, live bees are used. From the first swarm which issues, or from some over populous hive I get about four quarts. Cage them two or three days with the queens and they will never go home and they will remain on a pole anywhere. Sometimes these bees are shaken into a screened box and kept separate from the queens through the night. Then when they are placed with the queens again in the morning, they will make a great commotion or fanning, or those actions by which bees indicate their joy or satisfaction. It is very attractive to other bees, to say the least.

You can search for and cage the queen of a clustered swarm. Leave the queen with the swarm in the cage until ten o'clock the next day. Then place the queen and about a pint of bees on the alighting board of your prepared hive and the swarm will soon come down from the tree and go into the hive. Or if the hive is held so that the air from the fanning bees is wafted against the clustered swarm, it will cause an immediate uneasiness and action. After this you can take the hive down in the orchard and hide it and your swarm will come after it; or, of it is set in the cellar the bees will accumulate about the screened windows. The bees will follow the hive and queen as surely as a hungry dog will follow you for a chunk of meat that he knows is intended ior him. When they get located in this hive they will work with a vim that is not known in other kinds of treatment.

I used to think that this fanning and buzzing of bees to call each other was merely wafted air or sound, but there is indication that it is scent, and Mr. Pratt (Swarthmore) claims to have discovered a special scent organ. Most bee-keepers know that a few fanning bees are a great attraction to any flying swarm. It is what induces bees to cluster on a strange hive, and lucky is the man who can have his decoy in the place of the strange hive when the clustering begins. Much of this clustering soon turns the apiary into general confusion and idleness. The apiarist is at a total loss to know what to do to get the bees settled down to work. It may happen on the very days when honey in the flowers is most abundant—a time when the time of each of the individual colonies is worth fifty cents to one dollar a day.

An ounce of prevention is sometimes worth several pounds of silver. If these swarms are shaken and caused to build new combs or hived in a new location the cure is worse than the disease. It is cheaper to buy colonies than to form them with bees which ought to be in the supers completing sections of honey. I often make increase from odds and ends but not by undermining the main force. When the colonies are building up in the spring we have plenty of time to insert a guiding hand so that they build up evenly. Then they will all be ready for their supers at once and swarming will take place in all the colonies at about the same time. Then if we can succeed in guessing at the time when the honey harvest will begin, we can aim the whole apiary and make a "bull's eye" shot. In an apiary of 100 colonies there may be 20 to 30 swarms a day and the swarming season is soon passed. If the hives are not too large or manipulated to prevent swarms, swarming will set in before the honey harvest sets in and the colonies will have their new queens and be settled down for a long and steady pull. Then if there comes but three days of good honey flow every colony will take advantage of it.

That three days may amount to 25 or 30 pounds of honey to each colony, where, if part of the colonies are more or less broken up by swarming, or in expectation of swarming there will not be much done within three days.

Chatsworth, California.

INTRODUCTION OF BEES INTO NEW ZEALAND, 1839.

A Historical Note.

BURTON N. GATES.

THE NEW ZEALAND expert on bees, Mr. I. Hopkins, in his annual report to the Department of Agriculture, for 1906, makes official record of the first landing of bees in this country.

"It was on the 13th of March, 1839," writes Mrs. Gittos, wife of Rev. W. Gittos, of Auckland, N. Z., "that the good ship James (Capt. Mark Todd) anchored off the Mission Station of Mungunga, Hokianga. She brought a party of missionaries, among them Rev. J. H. Burnby and his sister, Miss Burnby. This lady brought with her the first bees I ever saw. They were in two straw hives and were placed in the Mission churchyard, being a safe place, free from the curiosity of the natives, who had never seen the busy bees."

In the next few years, at different points, several other consignments of bees were landed.

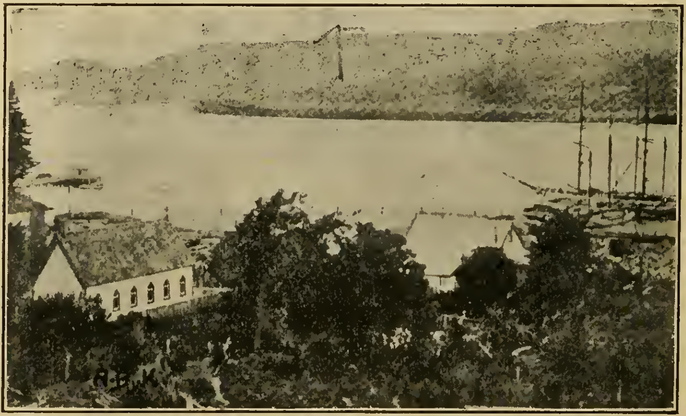
In 1840, "Lady Hobson, wife of the first governor of New Zealand, brought with her bees from New South Wales."

"In 1842, Rev. W. Cotton brought bees with him from England, to the Bay of Islands." Just previous, in the same year, there were bees landed at Nelson, from England, "sent out in the ship 'Clifford' by Mrs. Allom, mother of A. J. Allom, of Auckland, and for which she eventually received the silver 'Iris' medal, awarded by the Society for the Encouragement of Arts, London."

In the accompanying illustration, there is no mention of the location of the Mungunga Mission, but it is possible that the church in the lower left of the picture is that spoken of. The arrow in the background is also evidently an indicator, possibly of the ship's anchor.

In a little over a half century, New Zealand has built up from nothing, a very substantial industry. She has not only numerous apiaries as described in a recent number of the American Bee-Keeper, and a government expert, but has a government apiary of over fifty colonies under experiment. These results are not a little due to the efforts of Mr. Hopkins, untiring in his attempts to make bee-keeping a success in New Zealand.

Clark University, Worcester, Mass., Jan. 23, 1907.



LANDING THE FIRST BEES IN NEW ZEALAND.

SHALL WE USE SUGAR IN FEEDING OUR BEES?

ALLEN LATHAM.

IF THE WORLD were perfectly honest, if not a shadow of suspicion rested upon the honesty of any man of us, then could we answer yes, unhesitatingly to the question, Shall we use sugar in feeding our bees? We could then be sure that if any sugar at all reached the honey to be sold it would be small in amount, so small that neither you nor I would hesitate an instant to class it as pure honey. We should be unable to tell by taste or by other test that a possible one percent of the honey was not honey.

But since many men are dishonest, since men will cheat, since they will face a barrel of apples, since they will try to hide the poor sections in the middle of a case, since they will increase the output of their honey by the aid of sugar-feeding, since all these things and many more like unto them are true then must we hesitate to give an unqualified yes to the question asked above. Yet I, for one, find it difficult to say no to the question. In my own case I do not hesitate to feed sugar. I am confident that my reputation for square dealing raises my honey above the suspicion of impurity. Still, I am not able to say that my own feeding is not helping to keep down the price and consumption of honey the country over. And so the answer no hovers in my mind about as uncertain in alighting as the other answer.

That we must at times feed our bees is beyond argument, it is, occasionally feed or lose the bees. No one will say no to that need, but with the acknowledgment of the right to feed comes the denial of the right to feed in a way which will cause suspicion.

To avoid suspicion we can feed honey; but for some of us to feed honey would mean a cutting down of the income from the bees to the extent of putting us out of the business. Moreover there is always the lurking danger of foul brood in feeding strange honey to our bees. Then comes the question, Is it possible to feed sugar in a way that will avoid all suspicion? It has been suggested that we color the sugar syrup. This will protect the white-honey man (I came near saying the white honey-man) but still leaves the dark amber and buckwheat honeys under the ban of suspicion. Alexander feeds sugar by the barrel, and reaps buckwheat honey by the barrels. Dear old Langstroth said that he liked buckwheat honey diluted with white sugar syrup. Is this the reason that the Alexander buckwheat honey is so popular?

No, coloring the syrup will not overcome the difficulty entirely. Yet it would go far toward placing our delicious white honeys above the suspicion which now rests upon them. The truth is that many people, old people especially, who are prone to express themselves decidedly, have firmly fixed in their minds the honey which comes from the box-hive, a honey often dark, generally a blend, seldom white. They look askance upon a section of snowy comb, comb containing honey of a delicacy of flavor almost unknown in "taken-up honey."

The whole subject is fraught with difficulty, but we can surely use more care, and we can surely parade sugar feeding less. I cannot for one, approve of the parading of stimulative feeding when such feeding is done with sugar. I think that such advertising is unnecessary, and I believe moreover, that this variety of sugar-feeding is scarcely legitimate. Again, I must disapprove of wholesale feeding just before, during, or just following the honey-flow. It may be easier to do work about the apiary during a dearth of honey, extracting for instance, by feeding sugar syrup wholesale. But such process is not necessary; it should be condemned.

Why should the last mentioned plan be condemned, and why should sugar-feeding for stimulation of brood-rearing be condemned? For this reason: Though it is right in our eyes, it never can be in the eyes of the world, our customers. Not a few people believe that bees make honey, even in winter. To see a man feeding syrup and taking off honey simultaneously would cause many an observer to draw the natural conclusion that the bees were making honey out of the syrup, and he would so report. The apiarist might argue till night-fall, the motion of the eyebrows of the observer would decide the debate. The same would be true of wholesale feeding for stimulative purposes; hence I say, let all who feed to make apiarian work easier, or who feed to get their colonies ready for the harvest, feed with diluted honey else not feed at all.

The only legitimate use of sugar in a honey-producing apiary is to get the bees through the winter or through a time of dearth till the flowers come again. Even this sort of feeding seldom comes to the bee-keeper except as he brings it about by his system of management. It does sometimes come legitimately, but the visit can be made a rare one.

As to feeding to produce bees, or in queen-rearing, that is another thing. I think it perfectly legitimate for a dealer in bees to turn sugar or any other sweet into bees, but let that dealer in bees avoid trying to harvest a honey-crop in the same apiary where he is following such practice of feeding in a wholesale way. It would most assuredly create a cloud otherwise.

It behooves every writer upon this subject to see to it that he leaves the impression upon the reader's mind always that the sugar-feeding is done of a necessity, and that it is never done at a time or in a manner as to contaminate the honey-crop. This rule, I regret to say, is too seldom followed. It should be followed even at the expense of tiresome monotony to the bee-keeping-reader, since we can never know when the other reader will take up the piece of writing, read it, (mis) interpret it and parade it in clothing of his own make.

Let me close this with this exhortation: If we must at any time feed sugar syrup to our bees, and if we feel that we must tell about it in the papers, let us see that we make clear to the dullest reader that this sugar is fed to the bees at a time when honey is not being harvested and in such amount that the bees will use it up as food to live upon till the flowers come from which they can get food for themselves and honey for their owner. Such a course is possible, and seems to me imperative.

Norwich, Conn.

FAITHLESSNESS IN BEE-KEEPING.

J. J. WILDER.

THERE is no industry so burdened with doubt as bee-keeping. Not only is it doubted as being a sustaining business by the outside world but many of its pursurers exercise little faith in it as a side or sole business. It may be that they have not given the business a fair trial or it may be for lack of general information, as so many letters are written in regard to its profit which can only be answered by those who have given it constant study and proper attention for successive years.

Some love the business and would embark more extensively but are faithless or "on the fence," and as soon as a son, daughter or wife says they are getting cranky on the subject of bee-keeping and that bees are too insignificant to depend on, they quit. It may be that some other bee-keeper has given bee-keeping the "black eye" to him and caused him not to spread his business.

Partial or total honey failures, loss by disease or wintering, often cause one to quit, and others to lose faith.

Bee-keeping is subject to failure and loss, but there are sections and hundreds of locations where the honey flow has never been a failure, and no losses by disease or wintering, and if one is not content to start up again or spread the business where he is, then he should pull up and move to a better section.

It is estimated that only one-fourth of men succeed in business and this might be said of the bee business.

The man who starts with the determination to succeed, investing and spending a reasonable amount of money on his bees, buying bee books and subscribing for some bee papers, spending late hours reading and studying and planning his business and is willing to take smoker in hand and do constant toil among his bees, will surely succeed in bee-keeping somewhere. While the faint or faithless bee-keeper will never attain great success.

Cordele, Ga.

In reading the experience of others, we also read their mistakes and may avoid a like occurrence.—Grant Stanley.

BIOGRAPHICAL.

Four Veteran Bee-Keepers of Massachusetts.

Captain Charles Knight.
Haverhill, Essex county, Mass.

GEO. W. ADAMS.

CAPTAIN CHARLES KNIGHT can never appear as a veteran in any sense except that of experience, for he is one of whom we say so many "years young," not so many "years old." Genial, intensely active, and of clear and analytic mind he has few equals in practical knowledge of bee-keeping.

Born in Gloucester, Mass., in 1834, it was natural that while a mere boy he should become one of the band of intrepid sailors who have made that old sea-port famous throughout the world. In this stern school of toil and danger he acquitted himself so well that before he had reached his 23rd year he had become one of the "Captains Courageous," and for two years was in command of the "Fearless."

He married in 1854, and the gracious hospitality of his most excellent wife makes a visit to his apiary a double pleasure.

In 1857 our Captain made one of a party of hardy adventurers who won their way to Pike's Peak, and with his love of hazard and danger by no means quenched, he returned to enlist for the war of the rebellion in the 23rd Massachusetts, serving three years, and until so crippled by rheumatism that he was discharged and came home to die.

The writer can easily imagine that as a helpless invalid the Captain was not happy, at any rate a friend gave him a swarm of bees to amuse him and take up his attention.

To look at those bees through the window was not the Captain's idea of amusement, so he dragged himself partly on crutches and partly on his hands and knees, to examine. He carried his investigations altogether too far for his own comfort, and being practically helpless and not the kind who call for help, he was very badly stung.

Now, to a man of his temperament, thas was not a defeat but an invitation to try again, and he was back at the first opportunity receiving stings ab libitum which soon began to show their curative effect, and in a few months the very serious rheumatism was replaced by a chronic case of bee-fever. His health restored, he built his present residence in Haverhill, and entered upon bee-keeping as a business.

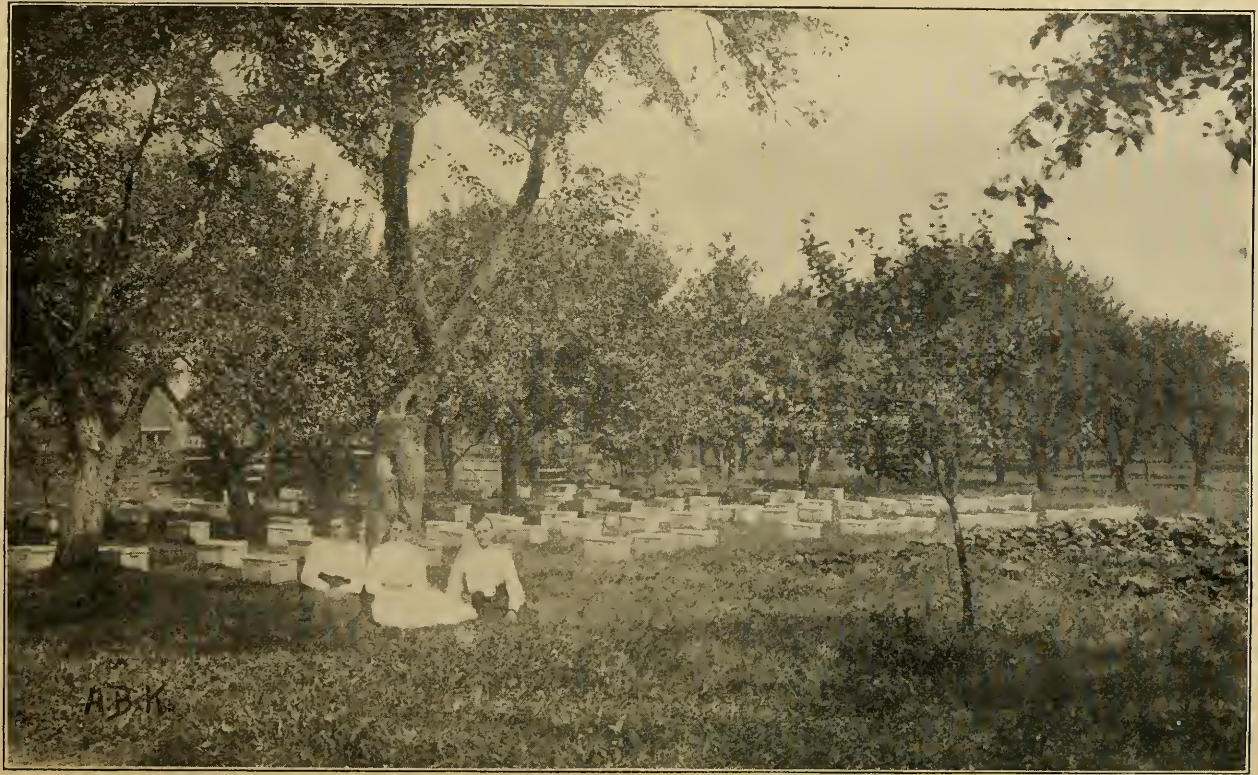
In 1900 he harvested 1800 pounds fancy comb-honey—but living as he does in the city, and having other calls upon his time, he restricts the number of colonies.

This is the third in a series of four biographical sketches, the first of which appeared in March together with portraits of the gentlemen included.—Editors.

AN ODOR-MEMORY.

A lilac odor today
Carried me miles away;
Hurried me back through years
To where a garden appears,
With blossoming apple trees
Alive with clamoring bees.
This is the garden I know
Where the lilac-bushes grow,
Where the timorous catbird's nest
Is built in the hiding leaves,
And the mother catbird grieves
Guessing my vandal quest;
Shaking the purple spray,
Chiding the thief away,
Frantic she threatens and begs
For her four blue, fragile eggs.
A lilac odor today
Made me a child at play.

—Thomas Lomax Hunter in Sat. Evening Post.



NO. 14

APIARY OF MR. M. C. HARRINGTON, WATERTOWN, N. Y.

PREVENT SWARMING.

W. R. GILBERT.

A VERY LARGE number of bee-keepers appear to take it for granted that first swarms are desirable; but still there are those who are beginning to realize that to stop swarming is not only a matter of convenience, in that such a method would avoid the necessity of watching the bees, but they see that in connection with this swarming system there are other disadvantages, such as a lessened honey crop, queenless colonies, the result of cells not hatching, the young queen being lost in flying out to mate, or imperfect queens.

Many find it a great disadvantage when they have only a few colonies to have to watch the bees. This is often done by a child or by some person not able to hive them when they do, and after the bees swarm, the man of the house has to be sent for, when he is working, to come and hive the bees.

He may have on clothing unsuitable for the apiary, such as a flannel shirt, the bees disliking and being liable to attack fuzzy woollen clothing. Or from work he may be sweating freely. This the bees resent, especially if the person is not in the habit of taking frequent cleansing baths.

The entire operation under these circumstances is an inconvenience. Again, many and many a swarm gets away unknown, and even afterwards unsuspected by the bee-keeper. Bees often do not do well, according to the statement of the bee-keeper when the bulk of the worker force has left. When the first swarm leaves, as a rule, unless there is a late flow of honey, crop for the season has largely left with it. Again the man having an apiary of 70 to 100 colonies, spends during the swarming season, the best part of the day in the hot and unpleasant work; of watching, chasing, climbing after, hiving swarms and seeing that they stay hived.

If there is no money in this work, there surely is no pleasure.

To the bee-keeper who runs out apiaries the swarming question is a serious problem. To put someone in an out apiary to watch the swarms, means to go to an expense, which will seriously reduce his profits.

Bee-keeping properly conducted, is a business which offers a good living and perhaps a little more, but at which large fortunes are not made. In this respect it is like other branches of the farm, and yet like other branches of agriculture, it offers the conditions under which true happiness and welfare for the home can best be secured. The highest ideals are not the temporary, distracting and enervating pleasures which city life alone can offer. Bee-keeping must then be conducted with economy, and such is not the swarming system. If a larger hive can be used, and these can be made at a cost of about 25 per cent. higher than a smaller one, by this means and special management, the need of watching for swarms, and the trouble of hiving them can be overcome.

Ordinarily if a man has ten colonies of bees, he figures he will have to have at least ten more empty hives, while with the larger hives he could be content with two or three; then the outfit would cost less; he could get more honey, for he would keep his worker force together, and can get much larger yields of honey and with less trouble. So second swarms and first swarms do not pay. If increase is desired and cannot be bought at a reasonable figure then increase by what is called the nucleus system—but that belongs to another tale.—Medicine Hat, Alberta, Canada.

CONTENTMENT,

Rather Than Force of Numbers, Determines the Worth of a Colony for Honey-Gathering.

W. W. M'NEAL.

CONTENTMENT rather than force of numbers is what determines the worth of a colony for gathering honey.

There is no striking difference in the ability of the various strains of bees to gather honey when the temperament of each kind is sufficiently understood to keep them in the mood to work.

NO. 15 APIARY AND ORCHARD OF MR. GEO. B. HOWE IN WINTER GARB.

It is vain to hope for uniform yields of honey merely from having colonies of uniform strength when said colonies are headed by queens of widely varying temperaments.

The best queens are not necessarily those that are the most prolific. A disposition to work under trying circumstances is the most valuable trait in the progeny of a queen. Prolificness is a quality directly opposed to the best results in surplus honey when the ruling passion is a mania for swarming.

Whatever may be said about the superiority of Italian bees, the black bees have it on them in one particular—they are free from the fertile worker pest and are decidedly preferable for determining the amount of influence the nurse bees have over the egg and the larval bee.

If female life in the bee is due to the instrumentalities of the drone at time of mating, and male life is wholly independent of such influence, what possible bearing can the compression theory have on the question of sex? Fertilization by compression is illogical and in no wise can the truth of the matter be determined thereby. Were it true that compression of the queen's abdomen by the smaller cells of worker comb is what enables her to lay eggs that develop into females, then the reverse of this as it is found in the larger cells of drone comb should invariably result in the production of males. Now, it is no uncommon thing for the queen of a swarm to make use of a comb the bees are building from a full sheet of worker foundation wherein the cells are not more than one-eighth of an inch deep. There can not possibly be any compression in such cases and accordingly her eggs should develop into male bees; but they don't do it.

ST. LAWRENCE AND JEFFERSON CO., N. Y., BEE-KEEPERS' CONVENTION, GOUVERNEUR, N. Y., DEC. 14-15, 1906.
NO. 16

The construction of worker comb always means contentment; drone comb signifies dissatisfaction, discontent or unrest. There may be perfect contentment in one part of the hive, and a state of discontent in another part at the same time, and this is quite often the case. Local disorders of this kind often correct themselves, but when the feeling becomes general, swarming results. But these little factions never fail to give expression to their anexiety or their grievances by the building of drone comb. It does not matter how compactly the clustered comb builders may draw together, if the impulse to swarm is present or the need of drones is felt for any cause whatever, drone comb will be largely in evidence. In proof of this let us notice the work of a colony a few days before it casts a swarm. Give them an empty frame in the brood chamber and they invariably build drone comb.

Now if bees usually swarm because of a crowded condition of the hive, would it be possible for them to cluster more compactly than we find them in the case cited? But do they build worker comb? No, sir.

Now notice, please, the work of the swarm after it has been put into an empty hive. If ever there was a time when bees are supposed to feel the need of store comb, it is then. But do they begin operations by building drone comb? No, sir! Their desire to swarm has been gratified and for the first seven or eight days they build only worker comb; then the leaven of discontent begins to work again, and drone comb is the result.

Wheelersburg, Ohio.

PRODUCTION OF "EXTRACTED" MORE PROFITABLE IN GEORGIA.

Other Notes From Dixie Land.

F. W. LIVINGSTON.

ALTHOUGH it is advised, and perhaps rightly, too, that every bee-keeper should produce both comb and extracted honey, I think there are few places in the Southeast where the extracted will not pay better, at the prevailing prices. The only thing against it being the lack of public confidence in its purity (this will be remedied when pure food laws are properly enforced everywhere). In this locality extracted honey has a more ready sale at seven cents than comb honey at ten cents, and I would prefer to raise extracted honey anywhere at six cents than comb honey at ten cents.

While the relative cost of production is more in favor of comb honey in this locality than in many others, the trouble of taking care of it through the long summer is all in favor of the extracted, for when that is once secured in a well ripened condition and put up in self-sealing tin cans, you need have no more trouble about it. Comb honey, on the contrary, must be sold soon after it is taken from the bees or it must be looked after carefully and frequently to keep it from the wax moth (of which there are two varieties here), and the little black ants that are always ready to appropriate everything sweet, and are particularly fond of honey.

We have a few kinds of honey here that are not so palatable alone as when mixed with other kinds; for instance, that obtained from poplar, cowpeas and cotton, and I even prefer gallberry honey mixed with some other kind like titi, blackberry or holly; though it is whiter when pure.

When honey is extracted the mixing can be effected to suit the taste, and I would generally prefer a mixture, when using it constantly, to any one kind in its purity, but I do not want honey mixed with other sweets that are not honey.

Leslie, Ga., Sept. 6, 1906.

BLOSSOMS BUT NO FRUIT.

Burbank to Be Asked to Investigate Freak of Nature.

Santa Rosa, Cal., Feb. 11.—Over on the Van der Mark place, in Western Sonoma, is a fifteen-acre orchard that has had but one crop of apples, and every year since then, although the trees are filled with blossoms, it has not borne a single apple. The accuracy of this statement is vouched for by people living in the district and Superintendent I. J. Button, at present in this city attending a meeting of the Supervisors.

Luther Burbank will be asked for an opinion regarding the cause of the freak of nature.—Exchange.

THE BEE-STING CURE.

R. I. Young, a wealthy Middletown farmer is rejoicing over his recovery from a long and painful experience with rheumatism. He attributes his cure to the bee-sting treatment, applied by State Zoologist Surface during the last three months. Once a week for three months he allowed himself to be stung, resulting in his cure.—Northumberland Co. (Pa.) Democrat.

LOWER FREIGHT RATES.

Platteville, Wis., March 5, 1907.

The South Texas Bee-Keepers' Association met lately for business at the residence of Pres. E. J. Atchley, and by united effort on the part of the officers, a reduction on freight rates from $1.85 per 100 lbs. on live bees in car load lots, down to 79c. per 100 lbs. to all points in Kansas, Missouri, Oklahoma, and other western points of the Ft. Worth & Denver R. R., and 81c to Denver and intermediate points in Colorado. This makes a bright future for the bee industry of Southern Texas, and to get the old rate cut more than half gives cause for rejoicing. We have put in application to Railroad Co. to the effect that we want a ruling to go along with the reduced freight, not to allow any one to load bees for shipment until such person has first screened the car with wire cloth in such a manner as will not allow bees to escape from cars while in transit. We feel sure we will get such ruling. The South Texas Association was instrumental in getting a one-third reduction on bees shipped by express from Beeville to all points on Wells Fargo lines, which reduction was later extended from other points. There are several cars of bees to go from Beeville this spring. This association also secured a lower local freight rate on honey several years ago."

N. E. France.

A GROUP OF BEE-KEEPERS AT THE NEW YORK STATE CONVENTION, AT GENEVA, LAST DECEMBER.

NO. 17

Nature has given to men one tongue, but two ears, that we may hear from others twice as much as we speak.—Epictetus.

The American Bee-Keeper Three Full Years $1.00. To New Subscribers, Three Full Years for Ninety Cents. Is that Cheap Enough?

THE BEE-KEEPING WORLD

Staff Contributors: F. Greiner, Adrian Getaz

Contributions to this department are solicited from all quarters of the earth

FRANCE.

Deformed Foundation.

Mr. Dadant says that it is an error to think that the bees can change the worker foundation into drone combs. He says that some times when making foundation the operator fails to put enough lubricant on the cylinders. Then the wax sticks to some extent to the cylinder and is pulled upward. This makes the cells longer in the direction of the going through, and the elasticity of the wax easily changes the width also, at least to some extent. The result is necessarily some larger cells. This may also occur when the sheet of wax is too hot when passed through the cylinders. Furthermore the wax thus stretched looses something of its strength, and will stretch more when loaded with the weight of the bees working at it. Impurity is another cause of trouble. When mixed with dirt and impurities the wax has much less strength than when pure and clean.—Bulletin de la Suisse Ramande.

The Rietsche Press.

Many times in this department, something has been said about the Rietsche press, and probably many readers have wondered what it is. A description is given by Mr. Pincot in the Apiculteur, from which the following is taken, except a few items that come from some other papers.

To begin with, the Rietsche press is not a press, but what we would call here a mould. Something like the plaster moulds sold some years ago by Oliver Foster, of Indiana. Two pieces of metal or cement composition are hinged together at one side and can be shut together like a book. The corresponding faces have the imprints of a sheet of foundation. The press is opened; enough melted wax poured on one of the pieces and the press shut immediately, so as to spread and imprint the wax. After a few seconds the wax has solidified, and the sheet can be taken up.

Some kind of lubricant has to be used, otherwise the wax would stick to the press. Many kinds are used, but a mixture of water and honey is generally preferred. The addition of some alcohol helps considerably, when using metal presses. What some people may consider as strange is the fact that the melted wax will stick to a polished surface worse than to a rough one. Some apiarists use merely water for lubricating the cement-stone presses, others say it is not sufficient, honey or something to thicken it should be added. It is probable that the temperature of the melted wax has a bearing on the matter. The hotter the wax, the thinner will be the foundation.

The metal presses make a foundation equal to any so far as beauty and quality are concerned. The foundation from the cement presses is equally as good but not so finely polished.

Compared to the roller foundation, the opinions are somewhat divided.

It is conceded that the press foundation bulges and buckles much less than that made on rollers. It is supposed that the rolled foundation being pressed very hard, is in a strained condition and regains it natural texture under the influence of the heat of the hives and the working of the bees. Some claim that it is impossible to make foundation thin enough for sections with the press. Others say it can be done. Very likely, the ability of the operator has a good deal to do with the results. It might depend also what one would consider "thin enough," and what is not.

Lately an improvement has been introduced. Besides the foundation imprints, the faces of the press have grooves corresponding to the wires of the frame, The press is of such size that the frame will just go around it, the wires resting in the grooves. The press is opened, the wired frame put on one of the faces, the melted wax poured on, and a few seconds later, you take up a frame with the foundation made and fastened to the wire far better than it could otherwise be done.—L'Apiculteur.

Honey vs. Sugar.

Several cases are cited when very young children who had to be fed on milk were habitually constipated. In such cases, water and sugar must be added to the milk so as to make it as near as possible like the mother's own milk would be. It was found that by using first-class honey instead of sugar, the constipation did not occur and the babies were in perfect health.—Bulletin de la Suisse Romande.

Bleaching Wax.

The Apiculteur says that a bee-keeper found that the addition of one per cent. of nitric acid to the wax bleaches it perfectly. No details are given.—L'Apiculteur.

Albino Drones.

Mr. Deletang has a queen whose drones have white heads.—L. Apiculteur.

Preventing Swarming.

Mr. Goury practises a method to prevent swarming which is about the reverse of what we Americans do in the same circumstances. When the flow opens, he places a second story on the first, but he puts a portion of the combs having brood in the second story, the new empty combs alternating with those already there in both stories. How he manages at extracting time is not stated. It must be remembered that the European apiarists usually wait until quite late to extract. By that time there are but few combs having brood.—La Revue Eclectigue.

To Make Hens Lay.

If you want plenty of eggs, feed your hens with the following mixtures: Honey six parts, buckwheat flour three parts, wood ashes one part.—La Revue Electigue.

Noise and Bees.

A correspondent states that during the Franco-Prussian war, one of the battles took place near an apiary. He was himself both a soldier and an apiarist, and kept "one eye on the enemy and the other on the bees." He says they did not seem to be disturbed in the least by the noise of the battle. They were flying in and out as usual. One swarm came out, flew around a while and settled on an apple-tree, just like it would have done ordinarily.—La Gazette Apicole.

BELGIUM.

Foul-Brood.

The Institute of Dahlem-Berlin has published a report concerning the study made there of foul-brood.

One hundred and nineteen samples of diseased brood have been received. Of these 112 were really affected. Out of the 112 samples, only 13 contained bacillus alvei. The question then came up: Is the said bacillus the cause of the disease or is it there only accidentally? To solve it, large quantities of bacilli were added to the feed given to colonies raising brood heavily, but no disease resulted. Then the bacilli were introduced in the cells containing larvae and sealed brood. No disease. In all the cases, another bacillus was also found, but similar attempts to introduce the disease with it failed as well as those made with the bacillus alvei.

Eventually another microbe was found, in all the samples. This is not a bacillus, it is of a cork-screw shape and has been named "spirochacte apis maassen." It was found not only in the dead or diseased brood, but also in the dried up remains even when quite old. It is not known yet whether the introduction of that organism into healthy colonies will develop the disease. The experiments will be continued next year.—Le Rucher Belge.

Mummified Brood.

Another report of the same institute relates to a study of what is now called mummified brood. The brood turns hard and brittle, but keeps its color. The adult bees are also attacked by the disease. It is not due to a bacillus but to another class of microbe, the aspergillus flavus. The microbe is found in considerable quantities in the brood and on the hair of the adult bees. Cultures of it inoculated to hens and rabbits gave them also the disease which in all cases terminated fatally. It is not known yet how the disease gets into the hives. Some localities are badly infected, others, in fact the majority (in Germany) not at all.—Le Rucher Belge.

Rendering Wax.

When melting combs, especially old combs, add plenty of salt to the water. That will help considerably in separating the wax from the impurities. A second melting is usually necessary. This time, instead of salt, add a little gelatine, stir it in well, and arrange so that the wax will cool down as slowly as possible. In cooling, the gelatine will coagulate and draw from the wax all the impurities into the water below.—Le Rucher Belge.

A Good Trick.

Many bee-keepers have sometimes observed that one or perhaps a few of their colonies were gathering honey rapidly while the others were doing nothing. The plain reason of it is that the working bees had found something to gather that the others had failed to discover. Perhaps merely a single field of buckwheat at a distance of two or three miles. That kind of situation often occurred in the locality were Gravenhorst was living. In such cases he exchanged combs with adhering bees between the working and the non-working colonies. The working bees taught the others in the same home were to find the place and in a day or two all the colonies were at work.—Le Rucher Belge.

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It is several months since a copy of The Apiarist, of Texas, has reached this office. We fear it may have gone the way of all Texas bee journals. (H).

The Bee-Keepers' Review is already out with a new spring suit, of the very latest cut and material right "up-to-now." It's the swellest thing ever. (H).

J. H. D., California, asks concerning duty on German imports of honey, and prices during fall months. We have undertaken to ascertain the information desired and same will be published as soon as available. (H).

The Canadian Bee Journal, for many years published by the Goold, Shapley & Muir Co., Brantford, Ontario, has been sold to the firm of Ham & Nott, of the same place. Mr. W. J. Craig, however, will continue at the editorial helm. (H).

"Some of the honey dealers can see no chance for a rise in the price of honey through the operation of the pure food law. Are they looking for a chance to make a little extra profit themselves?"—J. A. Green, in Gleanings. Pert and pertinent, that. (H).

After spending the winter in Louisiana and introducing the novelty of white clover honey in that country, Mr. C. W. Sewell, of Keating Summit, Pa., is back among his bees in the Keystone State. He lost but three out of 45 colonies, and is anticipating a good season. (H).

Honey production in Florida has been on the wane for several years past, and the present season promises to be a flat failure on the east coast, at least. Mr. O. O. Poppleton, the most extensive producer on the coast, recently paid The Bee-Keeper office a call, and remarked that the situation was becoming very discouraging. He is now searching for localities where starvation of the bees may be warded off by some natural supply of nectar. (H).

Mr. D. H. Coggshall, of Groton, N. Y., in company with Mrs. Coggshall, recently spent a day or two with the editor. Mr. C. has a sort of combination bee-veil and working shirt, which he donned to demonstrate its practicability, and while it can hardly be said to be "a thing of beauty," it appears to be quite a satisfactory bee dress for those who find it preferable to use such protection from stings. The device will be described by Mr. Coggshall in an early number of The Bee-Keeper, with illustrations. (H).

MISREPRESENTATION.

The following is from the Far-Western Bee-Keeper, for April:

"The American Bee-Keeper of December, '06, states that Germany produces annually forty million pounds of honey from nearly twenty-one million of colonies of bees—which means just about two pounds to the colony. The 'American' has another guess coming."

The American Bee-Keeper regrets to note that the new bee journal is starting in to make a record for itself for unreliable statements. It's starting early.

"The 'American Bee-Keeper' for December, '06," nor any other time, ever made the statement attributed to it. (H.)

A NEW PARALYSIS CURE.

The following, from the Galveston, Texas, News, by F. J. R. Davenport, possesses, at least, the merit of simplicity. As to its efficiency, we know not, but we certainly have no faith in the "cure," and would hesitate to recommend it to the inexperienced:—(H).

"I will now write on paralysis and starvation pertaining to bees, and how to eradicate them. The abdomens of bees that are affected with paralysis are swollen up. They crawl out on the entrance to the hive and wiggle around and fall off, and that is the last of them.

"Now to effect a cure for them: Take equal parts of honey and granulated sugar; melt a pint together to each hive that is affected. At sundown, remove the top and pull the cloth off and pour this warm liquid over the brood frames and contract the entrance. The bees will eat this liquid. The next morning if it is warm they will come out and take a cleansing flight and come back to their hives all right."

BEES HAVE SCOUTS.

Paris, Jan. 19.—M. Bonnier has read a paper before the Academy of Sciences announcing his discovery that each hive of bees possesses an intelligence department which sends out scouts to discover where honey and other good things are to be gathered.

M. Bonnier noticed that some bees remained hovering about flowers for a long time, as if prospecting. He marked some of them, and found that, when they discovered "a good thing," they flew direct to the hive with a sample, returning almost immediately with many companions.

Sometimes he found that the scouts appeared to give directions in the hive to their companions, for the bees began to stream out and fly to the indicated flowers unaccompanied by any of the "scouts."—Exchange.

Charity and good nature give a sanction to the most common actions, and pride and ill nature make our best virtues despicable.—Wycherly.

OUR COZY CORNER

BY HARRY E. HILL

No. 14—Unfortunately, we have not learned who took this splendid photograph. It shows the neat apiary, of about 100 colonies, situated in an orchard of about 40 acres, near Watertown, N. Y., belonging to Mr. M. C. Harrington. Mr. Harrington and his bride, just returned from their honeymoon, are also shown. Mrs. Geo. B. Howe, wife of the popular apiarian worker, of Black River, N. Y., is also presented, Mrs. Howe being the figure at the left. This is an excellent picture, and the American Bee-Keeper should be pleased to receive lots more of the same excellent quality, and reflecting such charming scenes.

No. 15—Corner of apiary, and orchard of Mr. Geo. B. Howe, Black River, N. Y., taken in a snow-storm, October 10th, 1906. So heavy was the snow clinging to the fruit trees that it was necessary to keep shaking it off to prevent breaking of the trees. This is one of the beautiful sights, characteristic of the North, with which our Southern friends are not familiar. When sending the picture, Mr. Howe failed to say who was the photographer.

No. 16—Taken at the Geuverneur Convention, late in the evening, and while it was snowing. Good results are hardly possible under such conditions. It serves, however, to show the fine attendance at the meeting.

No. 17—This little picture includes a number of the most prominent apiarists of the Empire State, and the Association represents the allied apiarian organizations of New York—the New York State Association of Bee-Keepers' Societies, who passed resolutions designating the American Bee-Keeper as their official organ, and officially conferred high honors upon the American Bee-Keeper and its publishers.

MRS. GEO. H. JOHNSON,
One of The Bee-Keeper's Most Successful Camera Users, and Her Pet Cat.

A PURE FOOD EXPERT.

Dr. H. W. Wiley, the famous chemist, was reminded by the Pure Food law of a story.

"A country grocer," he said, "was talking to a throng of customers about the wonderful sense of touch that the blind have.

"'Here comes old blind Henry Perkins now,' said the grocer. 'We'll test him.'

"And he took a scoopful of sugar and extended it to the old man.

" 'Feel this, Henry,' he said, 'and tell us what it is.'

"The blind man put his hand in the scoop, passed its contents through his fingers, and said in a firm, confident tone:

" 'Sand.' "

one year from thirteen dollars to sixty dollars each. Such results came from a system of working everything for profit. That is the spirit that controls in successful agriculture.—Seattle Post-Intelligencer.

The foregoing weeding out process can be also applied in apiculture and some of the progressive independent bee-keepers have already done so. (M).

HOME OF APIARIST GEO. H. JOHNSON, E. WOODETOCK, CONN.

SCIENCE IN DAIRY METHODS.

In Denmark the dairymen have succeeded in making every animal pay profits. This was done by thirty or more owners of dairies employing an official tester to report upon the results from individual cows. After carefully watching and weighing the milk for a given time the inspector reported on the individuals in each herd. The result was that poor cows went to the meat market and the producing value of dairy cows increased in

HOW SHE DOTH.

How doth the little busy bee
Improve each shining hour,
Gathering honey from clover and
Apple blossoms and dandelions and
Buckwheat and aphides and molasses
barrels and
Cidar mills and candy shops and so
forth, and
Mixing it with propolis and beeswax
and
Bee-bread and bug-juice and
Swarming out and leaving it to sour.

"AMERICAN" AND "EUROPEAN" FOUL BROOD.

Mr. D. M. Macdonald, Baff, Scotland, is the author of the following criticism, in British Bee Journal:

"'It will be noted that we have started the use of the names European and American foul brood,' says the editor of Gleanings. As earnestly and emphatically as I can I enter my protest against so misguided and erroneous a procedure. Coin names as you please, Mr. Root, but let them at least have a measure of common sense to justify their being perpetrated. Let the editor of Gleanings turn back a page, and see what intolerable confuson would arise from the use of these terms if they get established. So able a bee-keeper as Mr. Alexander (on page 167) gets into a perfect tangle in trying to elucidate the matter. 'Another point of difference is, a larva affected with American foul brood seldom dies until about old enough to be capped over, or after it is capped by the bees, while a larva dying from the effect of European foul brood seldom lives to be capped over.' That last statement is a caricature of the European disease, while the first clause exactly describes it. Again: 'I know honey with American foul brood is diseased; with European I have my doubts.' ! Why, our scientists have demonstrated this again and again! Bee-keepers here have no 'doubts,' because they have proof positive that from hives affected with Bacillus alvei honey is tainted. 'It is very easy to cure an apiary of European F. B., but the American F. B. is incurable.' I wish some American bee-keeper would only try his hand with some of our worst type. On simpletons who write about curing a genuine bad case by simply re-queening I won't waste words. The inspectors at St. Antonio believed the best 'cure' in bad cases was destruction by fire! I have repeatedly in the past, and now again repeat, that in such circumstances curing by killing is the only safe and sure course to follow."

HAND-PICKED DRONES.

The so-called new method of hand-picking drones for queen fertilization may look smart in print, but I should like to ask who did the "hand-picking" a few decades back, when bee-keepers produced as large and weighty supers as are seen to-day? For myself, I attach far less value to the golden color of the abdomen in the bees bred by "faddists" for beauty than I do to the energy displayed by the bee in the gathering in of the honey-crop.—W. Woodley, in British Bee Journal.

Is Vermont losing her sweetness? There is a falling off in both her maple sugar and her honey crops this year.—Boston Transcript.

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Falconer, N. Y.

HONEY AND BEESWAX MARKETS.

(Dealers' Selling Prices.)

Kansas City, Mo., April 8.—Both demand and supply for honey are light. We quote No. 1 white comb, 24-section case, $3 to $3.25; No. 2, 24-section case, $2.50 to $2.75. Extracted, white, 8c to 9c. Amber, extracted, 7c to 8c. Beeswax, 25c to 30c.
C. C. Clemmons & Co.

Chicago, April 4.—Market is quite bare of best grades of comb honey. When sales are made it is on a basis of 15c to 17c per pound, with very little outlet for off grades. Extracted, 7c to 8c. Off grades, 6c to 6½c. Beeswax is in good demand at 30c to 32c.
R. A. Burnett & Co.

Kansas City, Mo., April 15.—Supply and demand for honey are still light. We quote today: No. 1, per case of 24 sections, $3.25; No. 2, $2.50 to $2.75. Extracted, white, 8c to 9c; amber, 7c to 8c. Beeswax, 27c to 30c.
C. C. Clemmons & Co.

Worcester, Mass., April 16.—The supply of honey has been all cleaned up. There has been quite a call, but have had none in stock.
W. H. Blodgett & Co.

Denver, March 15—The supply of comb honey is very light, especially in the lighter grades. The demand is good. We quote our market today as follows: No. 1 white per case of 24 sections, $3.20; No. 1 light amber, $3; No. 2, $2.50; to $2.80. Extracted, 8 to 9c for fancy white; 7 1-2 to 8c for light amber. Beeswax 27 to 29c delivered here. Colorado Honey Producers' Association.

Cincinnati, March 11—There is very little demand for extracted honey at this writing, owing to the unsettled weather at this time of the year. However, we are looking forward, with interest, to a revival of trade, as soon as the warm spring days are here. Sell amber extracted honey in barrels at 6 1-4c. to 7 1-2c, the price depending upon the quantity purchased. Fancy table honey in crates of 2 60 lb. cans each, at 8c, to 9c. There is little demand for comb honey owing to the lateness of the season. We are now paying 32c. cash, or 35c. in trade, delivered here for choice yellow beeswax. The Fred W. Muth Co.

Milwaukee, March 7—The demand for honey is good for white, with supply light. Fancy white honey only is wanted here; Dark, slow sale. We quote our market today: Comb, 16 to 17c.; Extracted, 8 to 9c.; Beeswax 25 to 28c. J. C. Offerman & Co.

Cent-a-Word Column.

DO NOT burn your refuse from Wax Extractor. Send it to me and get your cash. Archie L. Coggshall, Groton, N. Y. tf

AGENTS WANTED—To sell advertising novelties, good commission allowed. Send for catalogue and terms. American Manufacturing Concern, Falconer, N. Y.

FOR SALE—45 colonies of bees, excellent strain, no disease, several hundred hives, foundation mill, dipping tank, Cowan honey extractor and numerous other appliances. Located in Florida. Cheap for cash. Address, S. B. C. Care American Bee-Keeper, Fort Pierce, Fla.

INCREASE is a hadsome little book telling how to form new colonies without breaking working stocks. A simple, sure, satisfactory plan, 25c. Baby Nuclei tells how to mate many queens from sections with a mere handful of bees; 42 pages, 20 pictures, 50c. Cell Getting tells how to save labor in rearing queens, 50 cents. Queen rearing outfits. Golden all-over and Caucasian Queens. Circulars free. E. L. PRATT, Swarthmore, Pa.

WANTED.—No. 1 white and amber and buckwheat extracted honey in 60 lb. cans or barrels. Send sample and quote lowest price delivered in Preston. M. V. Facey, Preston, Fillmore county, Minn.

WANTED—Bee-keeper. State age, experience, and lowest wages in first letter. W. Hickox, Berthoud, Colo. June 7.

IMPORTED QUEENS—Banat, Caucasians, Abkhasians, Cyprians and Lenkarans, $3.50 each. Italians and Carniolans and Carnithian, $2.50. Brown Swiss, $6. Safe arrival guaranteed. Write L. A. Lowmaster & Sons, Upper Sandusky, Ohio.

QUEENS SENT ON APPROVAL—After June first, I will mail a few queens, with escort of their own bees, for inspection. If you are pleased with queen, send money order for $1.00, if not pleased, turn over address and leave in office for return mail. These queens are carefully bred from a very hardy strain of bees. A. M. Applegate, Reynoldsville, Jefferson Co., Pa. Jy. 7

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THE A. I. ROOT CO., Medina, O.—Breeders of Italian bees and queens.

QUALITY QUEENS are the best Italians yet. Send for circular. H. H. JEPSON, 182 Friend street, Boston, Mass.

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W. J. DAVIS, 1st YOUNGSVILLE, PA. breeder of choice Italian Bees and Queens. Quality, not quantity, is my motto.

ITALIAN QUEENS AND BEES. E. E. Mott, Glenwood, Mich. Money Order office, Decatur, Mich. Jan. 8.

BUY YOUR QUEENS from the Red Clover Apiary. Bees guaranteed to work on red clover. Fine 3 and 5-banded untested Italian queens, 60 cts. Tested, 75 cts. If wanted before June 25, add 15 cts to above prices. J. L. Fajen, Alma, Mo. Dec. 7.

TALIAN QUEENS before July 1st untested $1.00 each; 6 $5.00 warranted. Tested $1.25 each; 6, $7.00. Caucasian queens untested, $1.20 each; 6, $6.00. Warranted tested, $1.50 each; breeders $5.00 each. Bees kept in seperate yards and the best of care used in rearing same. Price of nuclei and queens in quantity given on application. Order now. Circular free.
D. J. Blocher, Pearl City, Ill.

JOHN M. DAVIS, SPRING HILL, TENN.—Has greatly enlarged and improved his queen-rearing facilities. Two unrelated Carniolans and a dark leather Italian lately imported. My own strains of three-band and golden; "Moore's" long-tongue; Doolittle's golden; all selects. Carniolans mated to Italian drones when desired, No disease. Circular free.

WE are now booking orders for Providence Queens for spring delivery. Cull & Williams, Providence, R. I.

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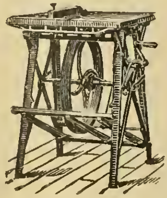

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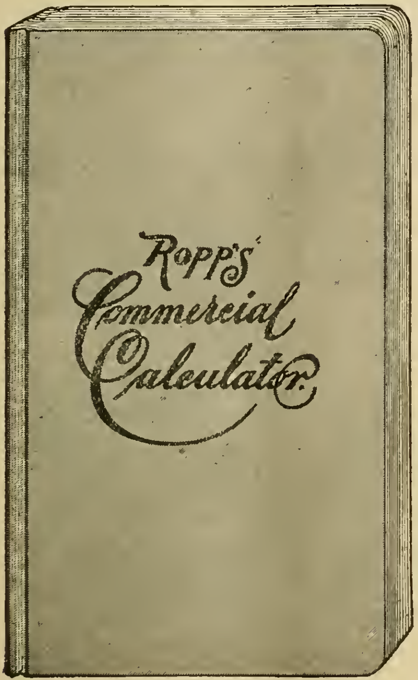

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June 7

HOMES In Old Virginia

It is gradually brought to light that the Civil war has made great changes, freed the slaves, and in consequence has made the large land owners poor and finally freed the land from the original owners who would not sell until they were compelled to do so. There are some of the finest lands in the market at very low prices, lands that produce all kinds of crops, grasses, fruits, and berries; fine for stock. You find green truck patches, such as cabbage, turnips, lettuce, kale, spinach, etc., growing all the winter. The climate is the best all the year around to be found, not too cold not too warm. Good water. Healthy. Railroads running in every direction. If you desire to know all about Virginia send 10c. for three months subscription of the **VIRGINIA FARMER** to **Farmer Co., Box 604, Emporia, Va.**

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John W. Hann

WAUNETA, NEBRASKA

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FIRST.—As above stated the honey must be produced in a Danzenbaker hive, either the present style or any Danzenbaker hive that has been put out within the last few years. These hives may be had of any dealer in bee-keepers' supplies in any part of the country.

SECOND.—For Classes 1 and 2 we require a shipment of approximately the amount stated, to be made by the bee-keeper direct to us at Medina. After the prizes have been awarded the honey entered for competition in Class 1 or 2 will be held subject to the instructions of the producer. We will sell it at a five per cent commission or we will ship it to any point direct by freight or express. There being good honey markets in our immediate vicinity as Columbus, Cincinnati, Cleveland, Buffalo, and Pittsburg, it can be disposed of without difficulty at good market prices, and the shipper will not have to lose a good market by shipping it here. Neither the honey awarded a prize nor that which obtained no prize is to be our property, but will be sold subject to the instructions of the producer who sends it to us. We are interested only in inspecting it to award the prizes.

THIRD.—For all honey submitted for prizes we must have a definite statement from the producer regarding the conditions under which it was produced, whether a light or heavy flow of honey, how the colony was handled, how many colonies in the yard, from what source produced, etc.

FOURTH.—For Classes 3, 4, and 5, we must, in addition to the above report have the signature of two witnesses certifying to the correctness of the report. If the party who sends us the report for the competition is well known to us we shall not require these witnesses. References may be given instead of the signature of witnesses if desired. All parties intending to compete for these prizes should send for blanks which we will furnish, on which the report may be made out.

FIFTH.—It will be noticed in the last three classes, three to five inclusive, that it is not at all necessary to send us the honey—all we require is a report.

SIXTH.—We reserve the right to limit the number of awards in each class, or to make no awards in a class if there are no satisfactory entries for the same.

SEVENTH.—No contestant will be awarded more than one prize in each class, but may make two entries if desired—one in Class 1 or 2, and another in Class 3, 4, or 5.

The classifications for the prizes are as follows:

Class 1.—For best shipment of 200 lbs. of comb honey in Danzenbaker hive.
Class 2.—For best case of comb honey in Danzenbaker sections.
Class 3.—For best report of yield from single colony in Dazenbaker hive.
Class 4.—For best report of yield from five colonies in Danzenbaker hives.
Class 5.—For best report of general results from use of Danzenbaker hive.

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Ten Prizes for each Class.
Fifty Prizes in all.

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The A. I. ROOT CO., Medina, Ohio

The American Bee-Keeper

JUNE
1907

Fort Pierce, Fla.,—Falconer, N.Y.

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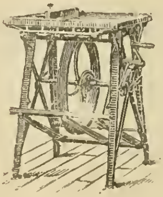

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FALCONER, NEW YORK

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June 7

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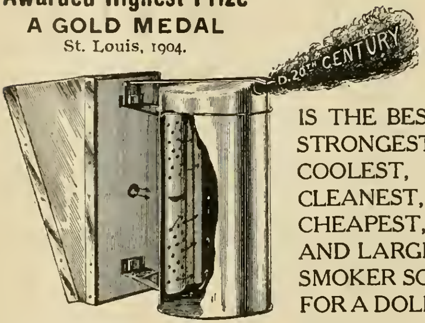

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Price Dan-ze, Large 3½-inch Smokers:
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"Facts About Bees," a sixty-four-page pamphlet, sent free on request. Send also address of your bee-keeping friend for same.

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The American Bee-Keeper, Falconer, New York

TWO YEARS FOR $1.00

After a man succeeds in publishing a good journal, the next step is that of getting it into the hands of the people, of getting them to reading it, and becoming acquainted with its merits. This can be done by advertising, sending out sample copies, circulars, etc. All this costs money. I think I am safe in saying that, for every new subscriber I have received, I have paid $2.00 in advertising; hence, I have always said that a publisher of a good journal could afford to send his paper one year free for the sake of getting it into new hands. It would cost no more than other forms of advertising, and would be more effective; but, for obvious reasons, this plan could not be put into practice; but I am going to come as near to it as I can. I have between 200 and 300 complete sets of back numbers for the present year; and as long as the supply holds out I will send a complete set, and the rest of this year free, to any one who will send me $1.00 for the Review for 1907.

Back numbers of the Review are different from those of newspapers and some journals. The information that they contain is just as valuable now as when first published. In an advertisement like this it is imposisble to give much description, but I will mention one or two features of each issue of

THE REVIEW FOR 1906

JANUARY.—The keynote of the Review for 1906 is "The Control of Increase;" and Mr. Gill, of Colorado, starts off by telling how he completely and profitably controls the increase of 1000 colonies run for comb honey.

FEBRUARY.—R. C. Aikin shows how, with a knowledge of principles, increase can be controlled; but perhaps the most valuable contribution to this issue is from R. F. Holterman, of Canada, describing "Some Short Cuts in the Production of Extracted Honey.

MARCH.—In this issue is illustrated and described the only really successful non-swarming hive that has yet been invented. Its inventor, Mr. L. A. Aspinwall, secured an average of 140 pounds of comb honey the past season from fifty colonies, and had no swarms.

APRIL.—The most valuable article in this issue is from C. A. Olmstead, of New York, in which he illustrates and describes a method of foretelling swarming without opening the hive.

MAY.—In this issue is begun a series of the most delightfully and beautifully illustrated sketches that have ever appeared in the Review—that of the editor's experience in locating and managing three out-apiaries in the wild, picturesque, raspberry region of Northern Michigan.

JUNE.—The article this month on "Control of Increase," is by that veteran, J. E. Crane, of Vermont, and shows how to do the work when the harvest comes early. This issue also gives the editor's experience in moving his 400 colonies into Northern Michigan—illustrated with four engravings.

JULY.—This issue has a beautiful full-page illustration of the Review apiary here at Flint (105 colonies), and the editor gives a resume of his work in this apiary for the first six months of the year—showing where he failed and why he succeeded.

AUGUST.—In this number the editor tells of "Reaping the Harvest in Northern Michigan," and gives pictures of the different apiaries, some at old abandoned lumber-camps, one with a tent for a honey-house, while the reading-matter has an actual flavor of the wild northern woods.

SEPTEMBER.—Of all the articles in this year's Review I doubt if any one is more really helpful than the one in this issue by the editor, entitled "Conveniences in the production of Extracted Honey." It has several illustrations, and shows how to use bee-escapes without the back-aching work of lifting the hives by hand; how to make a honey-knife cut as "slick as a razor;" how to make an uncapping-can for ten cents; how to arrange a cheap automatic strainer, and run the honey directly into the cans; and how to arrange an electric bell, at a cost of 60 cts., that will ring when the can is full.

Instead of mentioning some of the special features for October, November, and December, let me use the space to say that one of the good things that will appear in the Review for 1907 will be a series of articles from E. D. Townsend, Michigan's foremost bee-keeper. All of his writings in the past have been fragmentary, a glimpse here and there, and they have been scattered here and there in different journals. Now he is going to write in a consecutive manner, starting at the beginning of the season and going through the year—just as though he were writing a book. It will give his system of management.

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This is a book of 230 pages, beautifully printed, bound, and illustrated, that discusses bee-keeping from a money point of view—shows how to make a pleasant and profitable business out of bee-keeping. Price $1.20; or, the REVIEW for 1907 (and all the back numcers of this year free) for only $2.00.

W. Z. HUTCHINSON, Flint, Mich.

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THE AMERICAN BEE-KEEPER

Entered at the Postoffice, Fort Pierce, Fla., as second-class mail matter.

Vol. XVII. JUNE, 1907. No. 6.

A NOTE ON THE DAILY LIFE OF THE HONEY BEE.

PROF. F. KUHLMANN.

THE FOLLOWING few pages are a preliminary statement. The results are of one season's observation. It had been intended to continue the work through the past season, but mishaps in obtaining the required material prevented. I take pleasure in acknowledging my indebtedness to Prof. C. F. Hodge for suggesting the work, and for kindly furnishin~ me with material.

The object of the task outlined was to determine through closer and more prolonged observation than has usually been the case some questions that appealed to the writer and others as of fundamental interest. The observations were carried out mainly for the purpose of seeing, first, what was the daily rhythm of rest and activity of the bee. And second, what the differences were, if any, between the activities of the young bee and the old. The second is obviously the wider and more difficult problem. One season of study has yielded some scattering results of considerable interest along this line, but the present note will limit itself to a statement of the results on the first question. These, in the writer's opinion, decide the main object of the inquiry, although more observations are admittedlv needed to decide a number of interesting details, questions the present results themselves have raised.

The observations were made on two colonies in single comb hives, the comb being covered with glass sides placed within half an inch of the surface of the cells of the comb. All the bees could thus be seen at work in the hive. Each colony contained about 1,800 worker bees. Both queens were of the Italian variety, but had been mated with a mixed variety that was mostly Italian. The queen of the first colony was an old one, being in its third year. That of the second colony emerged in July in the hive on which the observations were made. The observations on the first colony were made in May and June, while most of the fruit trees were in blossom. Those on the second colony were made in July, August, and September. The method was that of pure observation, the life and activities of the bees being in no way interfered with, excepting that they were given an empty comb when the old one became crowded with brood, and that, during actual observation, the comb was exposed to diffuse daylight during the day, and to a weak artificial light at night. When more light was required to see what they were doing with antennae, mandibles, or tongue a small artificial light was turned on at close range on the individual bee under observation, for a few seconds at a time. None of these things seemed to seriously affect their behavior, not at all noticeably to ordinary observation. It was particularly desired to make the observations as minute and detailed as it was possible to do, so that some sort of quantitative statement of the results could be made. Consequently they were summarized in notes at least every five minutes, generally oftener, and the exact time the bee was engaged in each kind of activity noted. But, except where the occasion required it, no individual bee was kept under continuous observation throughout the day. Instead of this the observations were made generally in twenty minute periods, one every hour or every three hours. The observations on individual bees were limited to two queens, and eight marked workers. Further details and observations on special activities will be stated when I come to the statement of those results.

I shall give first the results on the two queens. Some statements will necessarily not be contributions to our previous knowledge, but are included for the sake of giving a complete picture of the bee's life.

The queen's work is all within the hive. She remains on the surface of the cells, never entering one except with the abdomen to deposit an egg at its bottom. The number of eggs laid in the course of twenty-four hours varies largely with the general condition of the hive, but it may normally reach two or three thousand. Says Cook: "The activity of the queen is governed largely by the activity of the workers. The queen will lay sparingly, or stop altogether, in the interims of storing honey, while on the other hand, she is stimulated to lay to her utmost capacity when all is life and activity in the hive." At any time of the day or night she may be seen moving slowly over the cells, the workers generally making way for her, frequently several being arranged around her, patting and rubbing her with their antennae, and offering her food. But at times she may be quite unattended, and the workers even hardly getting out of her way. As she moves along she frequently pokes her head into a cell, and if it is empty and clean, may dip her abdomen into it and deposit an egg. She seldom persists in the same kind of activity for longer than ten minutes at a time, on an average, much less than this. She may move along for several minutes without doing anything else, or may look into many cells, depositing eggs at the rate of two to several a minute. Then she may stop for an interval and sit more or less perfectly quiet, resting, or "barbering" (I use this term as descriptive of the activity common to most insects, and termed by others "making their toilet") herself thoroughly, or feed for half a minute or so. I transcribe the following from my notes as a typical twenty-minute period of observation: Observation on the young queen; time 4 p. m. "1. Rests, attended by 7-11 workers, licking and barbering her. An occasional slight move. 2. Barbers herself 20 seconds. Rests two minutes and then moves. Deposits an egg in 10 seconds. Egg in 10 seconds. Egg in 15 seconds. Egg in 15 seconds. Egg in 10 seconds. Seven cells looked into. 3. Egg in 12 seconds. Egg in 12 seconds. Moves. Four cells looked into. 4. Moves. Sits still 30 seconds, not attended. Sits still two minutes, attended by 7-11 workers." The main characteristic of her doings is the greatest sort of irregularity. She alternates from one thing to the other often at only several seconds intervals. From merely observing her at different parts of the day and night it is not noticeable that light or darkness makes any difference to her. She seems about as active at night as during the day, and in about the same way. The following table, however, gives my results in figures, on the two queens, with respect to three things, egg-laying, feeding, and resting. The old queen was watched for fifteen minutes every hour for a continuous period of twenty-four hours, omitting three hours, from 12-3 a. m. It was in the latter part of May when the hive was quite busy gathering pollen and nectar, and the comb about a fourth filled with brood. The results are grouped in three hour periods, and then expressed upon a twenty-minute basis.

OLD QUEEN.

		A .M.			P. M.		
	3-6	6-9	9-12	12-3	3-6	6-9	9-12
Eggs	12.8	9.4	11.2	10.6	9.4	12.0	8.0
Times fed ...	1.5	4.0	9.0	3.0	0.0	3.5	2.5
Min. rest	4.2	6.6	9.2	9.4	10.0	8.8	8.4

Above table covers twenty minute periods.

More observations were made on the young queen. During her egg-laying period she was watched at irregular intervals for eight days. The period of continuous observation was twenty minutes, usually one every three hours. The next table gives the results, expressed in the same way as in the preceding.

YOUNG QUEEN.

		A .M.			P. M.		
	3-6	6-9	9-12	12-3	3-6	6-9	9-12
Eggs		8.8	7.8	7.4	5.4	9.2	
Times fed ...	.66	.65	.37	1.37	.55	.82	
Min. rest	1.17	1.81	1.89	2.66	2.39	1.00	4.10

Above table covers twenty minute periods.

AVERAGE FOR THE TWO QUEENS.

		A .M.			P. M.		
	3-6	6-9	9-12	12-3	3-6	6-9	9-12
Eggs	12.8	9.1	9.5	9.0	7.2	10.6	8.0
Times fed ..	1.08	2.33	4.69	2.19	.28	2.16	2.5
Min. rest ...	2.69	4.21	5.55	6.03	6.18	4.90	6.25

Above table covers twenty minute periods.

The observations were not extensive enough to establish any small differences there might have been between the activities of the day and night. The figures are too irregular. But it seems evident that there is no very great difference. She is about as active during the night as during the day. There is some slight suggestion that she is a little more active during the very early morning, and then becomes gradually less so until midnight. See the lower column of figures in the last table. Another interesting suggestion is the difference in the amount of resting for the old and the young queen. The young queen rests less than a third as much as the old.

The observations on the worker bees were of three kinds. First, watching individual bees that had been marked with water colors, in the same way as the queens were watched. Counting the number of bees that came in per twenty minutes with pollen during the day, and, third, counting the number of resting bees in the hive every hour during the day and night. A mere glance at the hive at any time will show that the workers do not all rest or are all active at the same time. At any time of the day or night one may find "resting" bees in the hive. They rest either on or in the cells. On the cells they are usually along the margin of the comb where there are fewer bees to run into and over them, and usually here her rest is disturbed every minute or so by another bee running into her. When the number of resters is larger there is frequently a complete ring around in the margin of the comb where nearly all the bees are sitting quietly, while the central area remains more or less active. As a rule a period of continuous resting on the cell is not longer than a minute or so, on an average probably less than this, although off on the side where the other bees do not run much it may reach half an hour. This would seem to depend almost entirely upon how crowded and active the hive is. In the cell she may rest for several hours, at least I have observed them remaining in the same cell for that length of time. When in a state of profound repose she has every appearance of a dead bee. She seems to hang on loosely to the margin of the cell, and when in a vertical position frequently tilts backwards, apparently almost ready to fall off. Such dead rest periods are broken by a few seconds' breathing every several minutes, by movements of antennae and feet, and by disturbances from the other bees. I transcribe the following from my notes as a typical twenty minutes' observation on a resting bee, on the margin of the comb: "Dead rest for 20 seconds, when touched by another worker, and she moves antennae about for five seconds. Dead rest for 30 seconds, when she suddenly starts, moves legs about for 15 seconds, and antennae for 30 seconds. Dead rest for two minutes, except slight tremor of right antennae, and breathing for a few seconds. Dead rest for 40 seconds, when touched by a worker and she sways to the other side and moves antennae about for 50 seconds, when she is pushed out of the way by a running worker. Moves antennae about for two minutes. Dead rest for 30 seconds. Breathes for two seconds. Dead rest for one minute, except breathing once and movement of antennae for 5 seconds. Dead rest for 30 seconds, excepting a few jerky movements of antennae. Run into by a worker and she moves about for 15 seconds. Dead rest for 40 seconds, when touched by a worker. Moves antennae about for 10 seconds. Dead rest for one minute, when touched by a worker, and she starts and moves antennae for 5 seconds. Dead rest for one minute, except a few movements of antennae, and breathing once. Dead rest for one minute when she suddenly starts, moves antennae about for 30 seconds. Dead rest for one minute when touched by a worker, and she moves antennae about for 10 seconds. Dead rest for one minute, when she suddenly starts and tips forward. Dead rest for 15 seconds, when she moves antennae about for 30 seconds."

When not in the busy season of pollen and nectar gathering, or when from other causes she does not go out, she spends most of her time in the hive in what seems to be aimless moving about over the cells, looking into one now and then, and occasionally stopping to feed another bee or be fed by it. A very large proportion of the time is spent in barbering herself, for which purpose she may stop as often as every minute. The various duties of the hive, such as ventilating, building and capping cells, and feeding the larvae queen and drones, seems to require such a small proportion of each individual's time that I have observed it but a few times with the eight marked bees of which I have individual records. Between these other activities she changes off from one to the other at frequent and very irregular intervals, and, like the queen, does not persist long at a time in any one. I give the following again as a typical twenty minutes' observation on a marked worker: Time, 1-2 p. m. "1. Moves about for four and a half minutes, looking into two cells. Barbers herself for 30 seconds. 2. Moves about for four and a half minutes, looking into six cells. Barbers herself for 30 seconds. 3. Is fed by a worker for 20 seconds. Moves about for a minute and a half. Rests three minutes. 4. Rests a minute and a half. Moves about a minute. Rests two and a half minutes." When busy gathering pollen and nectar she has a quite fixed procedure to go through, to which I have not observed many exceptions. While moving slowly about in the hive in her usual way she may suddenly start to barber herself very vigorously, and then start in a wild run all over the hive, lasting sometimes for five minutes. This running is an almost invariable performance before she leaves the hive. She may be gone from a few minutes to an hour, depending probably mostly upon the distance she has to go for the flowers. When she returns and enters the hive one of two things or both almost always occurs. She may stop in a wild dance for a minute or more, consisting of a vibratory latteral motion of the abdomen. This seems to be for the purpose of preventing the other workers from robbing her of her pollen. At least when she is going through this performance several workers are generally arranged around her, making an occasional dive for her pollen baskets. But this apparent attempt at robbing seems to be initiated as often by her dancing as vice versa, for she often begins the same when no other workers are near her. After this, or in place of it, she generally spends a minute or two in thoroughly barbering herself, and then proceeds to find a pollen cell and unloads.

On the distribution of her activity over the twenty-four hours of the day I have the results of the observations as stated before. The eight marked workers were watched on an average about twenty-four hours each. But they were generally watched twenty minutes every hour, instead of every three hours, and at the times when they were apt to leave the hive they were watched all the time. Only seven bees figure in the results of the next table, which gives the average time spent in resting for the different three hour periods of the day, figured on a twenty minute basis.

	A .M.				P. M.			
	12-3	3-6	6-9	9-12	12-3	3-6	6-9	9-12
Min. rest	2.23	1.92	1.44	.66	1.25	1.68	1.14	2.29

With the exception of the 6-9 p. m. period this gives a fairly even curve. This low figure of 1.14 is undoubtedly, I think, accidental, and would disappear in the results of more extensive observations. The remainder would seem to indicate that they do about twice as much resting from 9 p. m. to 3 a. m. as during the rest of the time.

The number of bees resting in the whole hive were also counted every hour of the day and night for forty-eight hours, but this was done in about twelve hour sections, on different days, so that the results are not of a continuous twenty-four hours' observation. The number of resters thus to be counted at the same hour on different days seems to vary very greatly, and a more even curve would be obtained from a larger number of counts. It is not very easy, in fact impossible, to make an accurate count, because of the fact that they will be resting one-half minute and moving about the next half minute, while it takes about fifteen minutes to complete the count. Besides, many are often in the cells and others so thick on top that the cells cannot be seen. However, this, a considerable source of error, should not differ much from hour to hour, so that the relative number counted from hour to hour would remain the same, and thus not affect the results except in absolute numbers. The following are the results of the counts. The figures are average number of bees resting at the different hours of the day and night:

A .M.				P. M.			
12-3	3-6	6-9	9-12	12-3	3-6	6-9	9-12
778	756	374	327	217	328	493	680

These figures disagree with the results of the observations on individual bees in so far as in the previous table the maximum amount of resting at any time was only about two and a fourth minutes, while this table shows that nearly a third of the bees are resting from 12-6 a. m. This may be due to an error following from the condition of the counting, or it may be a real difference in the number of resting bees for the different weeks when the observations were made. The latter would seem the more probable. The results agree on the main thing, the relative amount of resting done from hour to hour.

The number of bees coming in with pollen per twenty minutes was counted every hour for a number of days. Since they also bring in nectar besides pollen, this is not a measure of their total activity outside the hive. Also, the degree of their activity varies very much with the condition of the weather, the season, the general condition of the hive, and the distance they have to go for flowers and their abundance. On a cold and cloudy day they may not go out at all to gather, especially not if it is a little damp. Their period of greatest activity is in the spring months when the fruit trees are in bloom, unless they have a special and abundant crop of flowers at another time. Also, the number of larvae and thus the demand for pollen and honey determines the degree of their activity in gathering. Consequently absolute figures in this matter are of little value, since they may vary over a very wide range. Of the individual bees watched, only two ever went out to gather pollen while under observation. Two of them were younger than the age at which they are supposed to begin to go out. Of the former two, one made a 40 minute trip from 8-9 a. m.. a 46 minute trip from 9-10 a. m., a 10 minute trip from 11-12 a. m., and a 19 minute trip from 2-3 p. m., of the same day. The other made an 18 minute trip from 8-9 a. m., a 40 minute trip from 10-11 a. m., and a 45 minute trip from 11-12 a. m., of the same day. Both remained in a state of dead rest for all but three of the 120 minutes they were observed at different hours during the afternoon of the same day.

The counts made on the number bringing in pollen were as follows: On the first hive: May 13, counts recorded for every ten minutes throughout the day, beginning at 8 a. m. May 20, counts made for twenty minutes of every hour of the day, beginning at 10 a. m. May 21st, counts made for twenty minutes of every hour from 5 a. m. to 11 a. m. On the second hive: Counts made for twenty minutes of every hour for five days in July, excepting that on two of these days the counts did not begin until 8 a. m. The next table gives the results.

	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8
May 13............				253	177	114	114	84	83	67	60	47	22	0	0
May 20............						80	32	35		28	33	41	56	84	0
May 21	3	13	167	142	38	19									
Av. July.........	10	12	28	49	64	37	26	30	29	30	34	14	3	0	0
Gen. Av.........	7	13	98	148	93	63	57	50	76	42	42	34	27	28	0

These figures are upon a twenty minute basis, the averages being average number of bees coming in with pollen per twenty minutes. They illustrate well enough the differences in the amount of pollen gathering from day to day, and from month to month. They also show that the changes in activity during the day may be different one day from that of another. The average shows a maximum activity near the middle of the forenoon, and then a gradual decline during the rest of the day. But on May 20th their activity reaches a second maximum in the evening. May 20th and 21st were exceptionally hot days, and this may account for both the early decline in activity in the morning and the second increase in activity in the evening. More observations will have to decide the relation between the amount of their activity and the temperature. The average gives some idea of the amount of work the individual bee does in the line of pollen gathering, assuming that they all do an equal amount. Upon the basis of this average the probable total number of trips made by the hive in a day for pollen is 2,274. With 1,800 workers in the hive this gives a little over 1.3 (one and three-tenths) trip per day for each worker. If the few observations on individual bees were any indication at all of the truth this suggests that not nearly all of the workers assist in gathering pollen. For according to their records the total activity of the hive should be higher. It must be remembered, of course, that the degree of activity varies over a wide range, and that the hives observed possibly represent considerably less than the average degree. Yet, a little figuring indicates that if their work were equally distributed the individual bee would have to do very little in order to make a very busy looking hive. Cook estimates that a hive has from 1,500 to 40,000 workers. Assuming a hive of 20,000, and having each worker making five trips a day for pollen gives a steady stream of bees with pollen entering the hive at the rate of 2.3 bees per second, for twelve hours of the day. This would make a quite active looking hive.

Clark University, Worcester, Mass.

BIOGRAPHICAL.

Four Veteran Bee-Keepers of Massachusetts.

ARTHUR C. MILLER.

GEORGE W. ADAMS—What pleasant memories are awakened by that name. I see before my mind's eye a fine old New England homestead, under great trees, and on all sides wide-spreading fields. But about all is an atmosphere giving a subtle charm which words will scarce describe. It is the spirit of a "home," of warm-hearted cordiality. The house was built about 1705, has been "in the family" ever since, and is filled with choice heirlooms which are carefully treasured. The history of every piece is known, and to the interested listener, Mr. Adams will relate both the history of the piece and of the people and occurrences of the time of its origin. Intense patriotism in its broadest and finest sense is a characteristic of all the family. I recall the thrill with which I listened while Mr. Adams, pointing to a quaint old plank door with heavy wrought-iron hinges and latch, said, "From that doorway the women of our family have seen their sons and husbands go to five wars."

From such stock sprang George W. Adams. He was born in the house in which he now lives—known as the Old Garrison House—in eighteen hundred and—well, never mind what, for his age is not measured by years. Somewhat past middle life he is yet a young man, alert and active in all the affairs of life. He received a good education, and then devoted himself to the calling of his fathers—farming—being the seventh generation to till those fields. It hardly needs be said that he has always been active in the public affairs of his town and has served it long and well, particularly in educational affairs.

Always interested in bees in a small way, until about fifteen years ago, when he began to make them a special study and give to them that same thoroughness of consideration which characterizes all his work. With full faith in the value of bee-keeping as an adjunct of farming as carried on in New England he has devoted himself to the development of a farmer's system. He has been markedly successful and has helped many persons to put their bees on a paying basis. As is to be expected, we find him a champion of the interests of bee-keepers and sturdily fighting subtle methods of the supply interests which he believes inimical to the best good of the honey producers. He is a power for good in all the walks of life. Long may he live.

This is the fourth in a series of biographical sketches, the first of which appeared in March together with portraits of the gentlemen included.—Editors.

A LETTER FROM TEXAS.

MRS. A. E. ST. LEGER.

THERE IS EVERY prospect of an early crop of honey, in this part of Texas. We have had such a mild, delightful winter, that there was not a week that the bees could not work; two consecutive days was the longest time that they had to remain "at home." The light frosts did not even hurt the tomato plants, which have borne all the season.

Last spring I planted some castor beans for shade, and this winter it surprised me to see how the bees worked on the blossoms. Now that there are so many trees and flowers in bloom, they have deserted them; almost every tree is clothed in green, the wild and tame plums bloomed early in February, also some peaches. Dewberry blossoms opened with the New Year. As for strawberries, a crate of ripe fruit was shipped Dec. 13th. Mulberries also are ripe, so they bloomed early. The white clover commenced blooming about a month ago, and now the little yellow flowers of the burr clover have opened; so the bees are as busy as they can be. They may be lazy, but I cannot and do not like to think of them as being so. When at work, there is such a joyous, animated activity about them, which reminds me of those persons it does one good to meet, full of life and enthusiasm, who enter into their work with so much spirit. I cannot think of them as being lazy, for I know they are not.

XYLOCOPA VIRGINICA AND SCOLIA PLUMIPES.

BEES FIGHTING.

Last fall I noticed the bees were fighting in front of a hive, and suspected they were being robbed. I could not attend to them immediately.

About an hour later, I went to see what they were doing, and was surprised to see the queen outside near the top of the hive. I persuaded her to return, turned the hive around, and the fighting ceased. The colony was strong with plenty of honey.

There are two other things which struck me as being strange, first, to find that the Harlequin bug was an enemy of the bees, for I saw one on a hive holding and eating a bee. Another time I found where the bees and bumble bees must have had a battle royal. I picked up twenty of the latter, with one or more stings in them; with them, was an insect (also stung to death) which at first glance I thought was a queen bee (at that time I was not so well acquainted with her majesty). Last year I saw the same kind of insects, caught one on a flower and chloroformed it, as I wanted to find out what it was, and why it was with the bumble bees, so far I have not been successful.

HANDLING FRAMES.

When removing the frames from a hive, instead of leaning them against the same, I like better to use a kerosine case with the bottom knocked out, and strips nailed on the inside near the top, to hang the frames on, the case is just the right length. Last year I hived several swarms in them, as my neighbor was prevented by sickness from letting me have the hives I had bought from him, in time.

REPAIRING BROKEN EGGS.

I must tell of a novel use for wax. I had a fine sitting of eggs, and was anxious that the hen should hatch as many as possible. On the ninth day after they were given to her, one was accidentally cracked right across one end. I had been sealing some jars with wax, so experimented on the egg; first cutting a thin piece of cloth, it was dipped in the hot wax and while quite warm, stuck on the egg completely covering the crack. The surface was then lightly greased to prevent it from sticking to the hen's feathers. It hatched as if nothing had happened, and I could not tell which chick was little Waxey. Since then, I have saved many eggs in the same way.

For the smoker I like to use old rags which have been sprinkled with propolis, rolled, and placed in the oven until warm enough to make the bee glue stick. They are then cut the desired length. The rolls must not be too thick to easily drop into the smoker. They burn well, and I believe the propolis helps to subdue the bees.

Wooster P. O., Texas, March 11, 1907.

The specimens of "bumble bee" and wasp, received from Mrs. St. Leger, were sent to Dr. E. F. Phillips, of the National Bureau of Entomology, Washington, for identification, who advises that the former is a carpenter bee, Xylocopa virginica, and the latter is Scolia plumipes. Photographic reproductions of the insects are herewith presented.—Editor.

WIRED FOUNDATION VERSUS WIRED FRAMES.

ALLEN LATHAM.

AT FIRST THOUGHT wired foundation appeals to our fancy more than does wired frames. Experience, however, is a thorough teacher, though her lessons sometimes come high. It is no desire of mine to injure the trade of the makers of wired foundation, but, believing in the greatest good to the greatest number, I purpose here to give my own experience with wire foundation.

Last year I used something over four hundred sheets of this foundation with the wires "made in," and I can honestly say that I wish that I had never heard of the stuff, for a meaner lot of combs on the whole, it has never been my lot to possess. I am not ready to say that foundation cannot be made already wired which can be successfully used, but I know that I shall not experiment further to discover the possibility of such a feat.

In the first place it is not true that this foundation can be put into frames more easily than frames can be wired and filled with regular foundation. With proper method of wiring and imbedding of foundation I prefer the work to the fastening of this already wired foundation in the frames. In point of time, there is little choice between the two.

Secondly, the wired frame holds

the wires, while the foundation, not the frame, holds the wires in the "wires made in" sort. Consequently, a comb built on the last mentioned kind must be kept edge down else it swings in a frame like a door on hinges. Of course, if bees fasten combs to end-bars well, then this is not so likely to happen, but we all well know that bees don't always do what we wish they might, and there are many colonies which seem possessed to keep the comb clear of all parts of the frame except the top-bar. With the wired frame the comb cannot swing whether fastened to frame or not.

Were the facts already mentioned the only faults of this wired foundation, then I might still use it in some amount. It is convenient for wide starters, for it will not sag a particle, no matter how wide a starter is used. Unfortunately it possesses other faults still worse than those already mentioned.

The wires possess naturally more or less elasticity, and when the sheet is rolled in the making, the wires tend to be curled up all on a side. The several wires, about an inch apart, exert unitedly a gentle but steady push to one side. The sheets so long as left piled together remain flat and beautiful to behold. Hang one up alone in a warm room, and in three hours the whole sheet will have a curl in it like a fish-hook. Fill a hive with frames filled with these sheets and many combs will curl to come in contact, while others will separate as much as two inches. The result is something horrifying to an intelligent apiarist. He has to go through his hives, take out each comb and pinch the edge back the other way, in a word, uncurl the lower edge of the foundation or comb. In more than one instance I have had the pleasure (?) of lifting a comb only to haul out the next one bodily, the two having been so completely united by the bees. The second one comes out, of course, all rolled and twisted almost beyond repair.

I had to go through all my hives this spring and straighten and make over scores of combs. Very few combs indeed of those built on wired foundation were first-class combs.

In times of scarcity and almost always when wax is scarce, bees gnaw the edges of their combs to get wax to cap over brood with. This is bad enough in all cases, but when it happens with combs built on wired foundation, the evil is bad indeed. The bees expose the ends of the numerous wires and apparently are influenced to gnaw more and more. I found many combs which had a fringe of wires sticking out their lower edges an inch or more. Every comb built on the wired foundation has a cheval-de-frise of greater or less development along its lower edge, while the two outer wires are frequently gnawed entirely clear so that they hang on the frame like two little love curls.

It is doubtful whether foundation already wired is worth effort toward improvement. If it is to be made it should be wired (?) with material absolutely without elasticity, and material which the bees can remove in case of exposure. The annoyance of pulling out a comb with wires dragging along the adjoining comb, thereby stirring the bees to wrath, is not to be thought lightly of.

Norwich, Conn.

GERMAN HONEY IMPORTS.

Oakland, Cal., April 27,1907.

Could you give, through The Bee-Keeper, the duty on honey and wax going into Germany, also the market price for several fall months last year? This information may be of use to other subscribers who, like myself, are looking for the highest market price in disposing of this year's crop. Yours truly,

J. H. Dixon.

L. Gabain writes me from Hamburg, letter just at hand, that he imports the larger share of the honey which comes to Germany from foreign countries, or about 3,000,000 pounds in all, for which he pays from $4.28 to $5.23 per hundred. The import duty on this honey amounts to $4.76 per hundred pounds. It is shipped in the square cans, two in a box, and after the boxes are weighed, 9 per cent is allowed for the packages.

Yours truly,

F. Greiner.

Strive to produce better honey rather than more honey.

COLORADO BEE-KEEPERS.

Please Sit Up and Take Notice.

Boulder, Colo., April 17, 1907.

To the Bee-Keepers of Colorado:

I, as a member of the Colorado Bee-Keepers' Association, do most earnestly desire your audience for a few moments, on a question of vital importance both to you and the members of our association.

If you, dear reader, happen to be a person with your eyes wide open, a person of keen perception, which you must be if you are an up-to-date bee-keeper, you surely have noticed, long before this, that organization along co-operative lines, for mutual benefits and protection, is the order of the day. All lines of industry are rushing to the beneficent cover of co-operative organization. And well they may, for the stress of competition in this day, when one improvement succeeds another with almost the rapidity that one drop of water follows another down the river-bed, and the thought governing our actions today will be deserted to give place to a more advanced thought tomorrow, I say well may we seek co-operative support, lest we get lost in the whirlpool of events. The hour is not far distant when financial interests are going to set about controlling the price of our product, honey. They already control the price of our supplies and freight rates, and we in our divided, individual, selfish interests are an easy prey for the combinations that fatten off our cupidity. Therefore, I say, brother bee-keepers, come in under cover, join a bee-keepers' association, if you are not in our beautiful state of sunshine and flowers, Colorado, then join your own state association; and if in Colorado, send your $1.00 to S. Francis, of Erie, Colorado, for a year's dues and become a member of the Bee-Keepers' Association. But do not stop there, or it will do you very little good. As soon as you have joined, make up your mind at once that you are not going to be one who is willing to receive and not give, but that you are going to experience the fullness of the old, old statement, "That it is better to give than to receive," and therefore, that you are going to attend the next State Bee-Keepers' Convention and help to make it a success, and in so doing be in the front ranks with the bee-keepers of the state and get of their experience, which I know you will, an abundance equal to or in excess of all you can bring.

Very truly yours,

W. P. Collins.

President State Bee-Keepers' Association.

AWAKE, COLORADO BEE-KEEPERS.

Erie, Colo., April 20, 1907.

To The Bee-Keepers of Colorado, Greeting:

At the last convention of the Colorado State Bee-Keepers' Association, which met in Denver, January 22 and 23, 1907, I was elected secretary of the association. In looking over the list of names I find there are barely 50 active members that belong to our association. At one time there were nearly 200 members in our organization.

What has been the cause of the decrease in membership?

I may say one of the greatest discouragements to bee-keepers anywhere is a failure of the honey crop, such as was experienced in Colorado in 1905, the depressing effect of which was noticeable at our convention of that year, although many of us had enthusiasm enough to get together and discuss the probable reasons of the failure.

Again, a very large number of individuals who keep bees are not wholly dependent upon them for a livelihood, hence are not "bee-keepers" in the true sense of the word, and not interested in bee-keepers' associations, and in many instances do not subscribe to any bee journal.

There may be other reasons for the lack of interest in bee-keepers' associations, but I think these are the most important.

We have arranged with the editor of The American Bee-Keeper to use a portion of his journal for the publication of items concerning bee-keeping in Colorado, and for the advancement of our State Bee-Keepers' Association, by pressing the needs of bee-keepers and the advantages of organization.

Are you an active member of the Colorado State Bee-Keepers' Association?

If not, the payment of $1.00 will make you such for one year from the date of such payment.

Are you just keeping bees or are the bees keeping you?

Were you in attendance at the last convention of the Colorado Bee-Keepers?

Have you subscribed to The American Bee-Keeper? If not, please send me $1.00 and you will receive a full report of the many good things that transpired at the last meeting of our association.

For the last 36 hours we have had a raging snow storm, about two feet of snow on the level has fallen. All fruit bloom will be destroyed by the cold, freezing weather tonight, and I fear many colonies of bees will lose some of their brood. But we rejoice, nevertheless, as this moisture will be of untold benefit to the farmers and bee-keepers as well. If the weather turns warm I think bees will get some honey from fruit trees not in bloom yet. My thermometer stands 14 degrees above zero, at this writing. Yours very truly,

S. Francis.

Secretary Colorado State Bee-Keepers' Association.

KENTUCKY HOSPITALITY.

Cincinnati, April 15, 1907.

Dear Harry:

I take pleasure in enclosing herewith a pretty photograph showing a corner of the apiary of my dear friend, D. F. Weaver, of Minerva, Ky. By the way, he is not a subscriber to your paper, so put his name upon your list, send us the bill, and we will remit promptly.

Photo by F. W. Muth.

APIARY OF D. F. WEAVER, MINERVA, KY.

Friend Weaver has 175 colonies of bees, and is an extracted honey man.

Some ten days ago, I was afforded the pleasure of making a trip through Kentucky and in his neighborhood. When I called at his home, learned that he had gone for a day to buy some bees, but his good wife bade me remain and await his return, which I did.

No doubt, you have heard of the hospitality that is bestowed upon a stranger down in Kentucky. Well, it is all you have heard and more too. I could not begin to describe to you, and do my Kentucky friends justice, the true hospitality with which I was made welcome.

Mr. Weaver has a brother-in-law, a Mr. C. T. Biggers, of whom I will send you a picture later on, which, I believe, will be interesting.

Fred W. Muth.

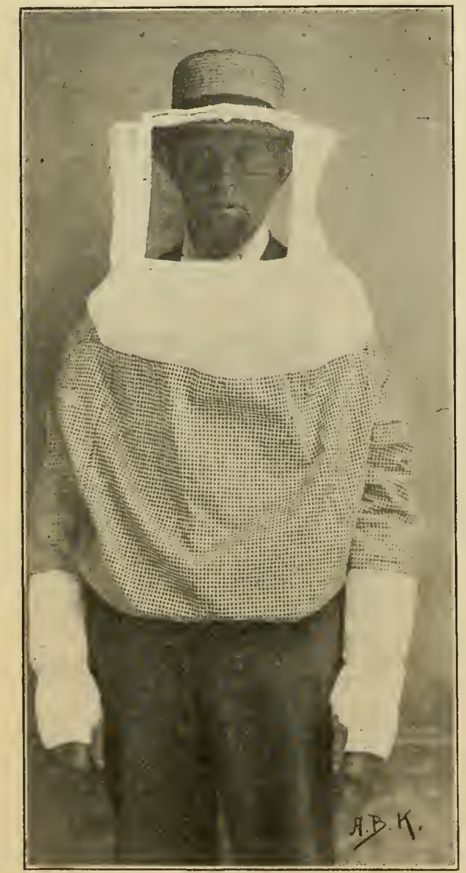


Photo by H. E. Hill.

MR. D. H. COGGSHALL IN HIS FAVORITE BEE-RIG.

ANOTHER BEE DRESS.

D. H. COGGSHALL.

Editor American Bee-Keeper:

In The Bee-Keeper for February, I see pictures of the Latham-Miller bee veil. With your permission I should like to give a description of the veil I use at my place in West Groton, N. Y. It is absolutely bee-proof, and does not give the bees any chance to sting one about the neck.

Out of thin gingham an over-shirt is made that comes up even with the shoulders, and the sleeves long enough to come to the knuckles, where a piece of rubber cord holds it snugly around the hand. An opening is cut for the thumb, so that only the fingers and thumb are exposed, A rubber tape around the waist keeps it snug there also.

The veil proper is made of bobbinet, which I obtain at millinery supply houses, and comes 18 inches in width. It is cotton goods and very strong. This is sewed around the top of the over-shirt, and is large enough to pass freely over the brim of the hat. An elastic cord, permanently secured, holds it snugly around the crown.

Now for the vision part of it: I cut a piece of black wire-cloth about nine inches square and hem the edges with strips of oil cloth or strong muslin, first lapping over the edges of the wire-cloth so that the points will not punch through the binding. Now cut out an opening in the front of the bobbinet, having the top come on a line with the hat brim.

Make the shirt loose enough so that it can be easily put on and taken off. When one wants a drink he can easily slip the rubber off over the hat crown and drop it down conveniently.

To keep the blouse up snugly, I attach a piece of rubber tape across the back from shoulder to shoulder, which holds it in place nicely.

I rub paraffin over the back of the cloth covering the hands, which fills the fabric and prevents stinging.

With this rig I can work all day in the buckwheat season and never have a single "bee in my bonnet."

Stuart, Fla., Feb. 20, 1907.

If the shallow frame is no good for wintering, how is it that bees in their natural abode—the hollow tree—often have combs built eight feet in length and only six to eight inches wide and winter successfully?—Grant Stanley.

FROM SANTO DOMINGO.

Sabana La Mar, Santo Domingo,
March 8, 1907.

Editor American Bee-Keeper:

Permit me to thank The American Bee-Keeper and Dr. Blanton for their good advice, which came too late, as I had lost all my bees. I have, however, started anew; but on account of difficulty in securing material, could not follow the good doctor's advice in detail, though it was a great help to me, and thereby I avoided many errors.

We have the stingless bee here also. They are seen on the bloom of the tamarind tree, though I have never seen any of the other kinds of bees working on this bloom. I do not think that they amount to anything—that is, for domestication.

The more I read of the Caucasian bee, the more I think it is the same, or very near the same as our native Dominican bee. Its stinging and working propensities are about the same.

Will you please tell me the best way to extract pollen from the combs, regardless of the combs, the pollen to be fed?

Joseph Braun.

If pollen is to be fed, and the combs are not needed otherwise, why extract it? In the comb it is in the most convenient form possible for feeding.—Editor.

ENTOMOLOGIST FROM HAWAII GOES TO WASHINGTON.

D. L. Van Dine, experiment station entomologist for the Hawaiian islands, arrived a few days ago and is now at Washington, D. C., where he has gone to confer with Dr. L. O Howard, chief of the Bureau of Entomology of the Department of Agriculture, concerning a number of problems that have come up in the entomological affairs of the islands.

One of the most interesting of these is in regard to the honey produced on the islands. There is some substance there that the bees obtain that gives a very high percentage of glucose in the honey. The government pure food law allows only a certain percentage of glucose, as that substance is one of the chief adulterants that is commonly used. While the island honey is pure and just as wholesome as that produced in any part of the world, this comparatively large amount of glucose shows badly in the analysis. The honey shipment of the islands will amount to over 800 tons this year, and the producers are greatly interested in having the law so modified in their case as to allow the honey to come under the pure food products.—California Fruit Grower.

WITH THE VEIL SLIPPED OFF THE HAT.

THE BEE-KEEPING WORLD

Staff Contributors: F. Greiner, Adrian Getaz

Contributions to this department are solicited from all quarters of the earth

GERMANY.

By far the most hives formerly used in Germany opened from the back, cupboard-fashion, and the frames were pulled out with a hook or with a specially constructed pair of forceps. In order to examine the second frame the first one had to be removed, and in order to have a place to put these combs as they were taken from the hive, a special comb-holder had to be carried along. When the examination was not carried on to the last frame, of course then only those frames actually taken out were disturbed, but when all had to be taken out, they were disturbed more than when the frames of an American hive were examined because after examination they can be returned to their hive with the latter, while with the German hive they have to be handled a second time to return them. The loss of heat must be greater in such a case, and the disturbance also. I think all frames used in German hives have some sort of spacer, either nails, staples, or others. It is true the first frame can be removed from a cupboard-fahsioned hive easier than from an open-top hive, like the American style, but it takes more time to examine each frame. For many years the bee-keepers in Germany considered it impractical to remove frames from the top, and I think for that reason our hives were condemned by many; but the attitude of the German bee-keeping fraternity is somewhat changing. Joh. Binder says in Allgem. Z. frei Bzcht, that it depends largely upon what one is used to, but this should not lead him to condemn the other hive; bees may be handled successfully in either hive.

Further on, the same writer says, that he cannot agree with the theory advanced by another writer in that paper, and holding that bright yellow queens were to be preferred to dark ones on the ground that the yellow queen may be found much easier on a dark comb. Mr. Binder says he would not condemn a good queen on account of her color. (This is very good doctrine, but the supposition is, that the queens are good anyway, then, in that case, a light-colored queen might be preferred, because she can be found easier or makes herself more conspicuous. It may be simmered down to a matter of time-saving.)

Schoenfeld made the discovery that there existed a peculiar organ in the honey-bee between the honey-sac and the true stomach, called "stomach-mouth," a four-lipped opening or rather valve with a protruding neck which may be shoved forward through the honey-stomach and brought into connection with the oesophagus or swallowing pipe, thus nourishment may be taken in or passed out without emptying into the honey-stomach at all. It was supposed that the bee could pass the honey from the honey-stomach to the chylus—or true stomach through the "stomach-mouth," and many hold to that opinion now. Dr. Miller says in his comments on the A B C of Bee Culture, that the bee can do this and live a long time on the honey stored in the honey-stomach. This, however, is contradicted by many close observers of late. Joh. Binder says in A. Z. f. Bzcht, of March, that if the honey bee was enabled to live on the honey in her own honey-stomach she would in all probability, not lay up any honey at all; but she must empty her honey-sac first before she can take food into the true stomach, thus she is compelled to hurry home and store the gathered nectar into the waxen cells. It is therefore probable that raw nectar is not taken into the true stomach neither for food nor for any other reason. The chemical change that occurs, when the nectar is transformed into honey is probably the work of certain glands located along in the mouth and the honey is not used for food by the bee until it is thus transformed.

The lips of the "stomach-mouth" are fringed with hair pointing inward. It is said this hair acts as a strainer to catch and separate the pollen from the honey. But the gleaner of this cannot see how the pollen can be strained out of the nectar by this apparatus, for, according to the above representation, this nectar does not pass through it at all without it went into the true stomach.

The great bee-keepers' meeting of the Austrians and Germans will be held in Frankfurt a. M., Aug. 2 to 8, a full week. The city not only provides suitable buildings for the gathering and the exhibition connected with it, but also donates $500.00 to make it a success.

The Prussian government announces a bee-keepers' institute lasting from the 21st to the 25th of May, to be held in Berlin. The principal institute-workers are Rev. Gerstung, on theories; Rev. Ludwig, on the practical matter. Admission is free. Board and lodging will be provided at reasonable rates.

That G. M. Doolittle was the first to make practical use of artificial queen cells in America, there is, perhaps, no doubt. Langstroth invented the frame himself, although some one else may have used a similar affair even before he did. The artificial queen cell is now claimed by Wm. Wankler, a bee-keeper in Germany, having exhibited them as early as 1882 in Bruchsal, August 27-29. The exhibition of these cells was accompanied by wooden cell cups similar to the Swarthmore cups. Mr. Wankler was regarded as a crank or lunatic by his brethren and the invention was ignored. Mr. F. Benton is said to have bought the outfit in 1883 and Editor Alfonsus (of the Bienenvater of Vienna) certifies to the correctness of Mr. Wankler's assertion, having seen the exhibition. The Bienenvater has a long article from Wankler, describing the method of queen rearing, of which I will only mention here how it happened that he came to use artificial cells. The mother of W. made artificial flowers and for this purpose dipped little cups similar to the cell cups of Doolittle. One day his mother was watching him grafting cells (natural cells which he had collected from his hives) when his supply gave out. It was then that his mother suggested to him to try such cells or cups as she was using for her artificial flowers. He at once acted on that suggestion. However, these cells were not accepted as regularly as natural queen or drone cells.

GERMAN SOUTH WEST-AFRICA.

Mr. E. Tisch compares this German colony with the heath in certain portions of Germany, which is a barren land upon which the heather grows, furnishing an immense bee-pasture. Just such lands seem to be an Eldorado for bee-keepers in Africa. There seems to have been the difficulty with the wild bees that they could not be induced to stay in hives offered them by man and they would sail away and seek abodes in the woods. A missionary by the name of Judt succeeded in so making a hive as to find favor with these bees during the 80's, and since then bees have done wonderfully well, giving 100 pounds of honey in a season; they work the year around. Feeding is never necessary. One of the best honey-plants seems to be a locust, (acacia cafra, acacia tenax, etc.), a variety in bush form, also what is called wild tobacco (nicotiana glauca), with far showing yellow blossoms, and Talmarix articulata.

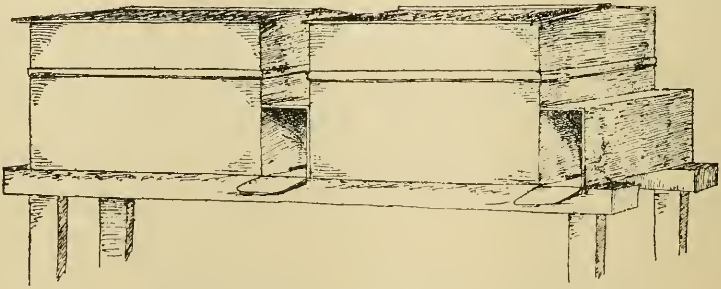
During the rainy season bees are moved to the highlands (steppe), where a new vegetation springs forth in a little time, covering the ground with hyacinths, orchideae and liliaceae, the whole surface being one continuous sea of blossoms, and myriads of bees and insects swarming about them.

AUSTRIA.

Some bee-keepers believe there is nothing in color, i. e. painting neighboring hives, particularly nucleus-boxes, of different colors; but it may be observed that such bee-keepers have a great deal more trouble with queenless colonies. It assists the young queens very materially to find their hive on a returning trip when they have been painted of a color different from its neighbor. Hive and alighting board should be of the same color.—Ung. Biene.

Bee-keepers in Austria, Germany, and, in fact, nearly all European countries, are not situated as favorably as the large portion of American bee-keepers as to the room at their command, placing their hives singly and spreading them out over an extensive yard. Bee-keeping is also not carried on by professionals, and for other reasons bee-keepers prefer to have their hives stand in a cozy room. Their hives must therefore conform to this notion or these conditions. The bee-keepers who value the American hives have therefore, studied how they can adapt our hives to their wants. Four different men of Austria and Germany, Houbes, Gerstung, Ludwig and Znidersic, hit simultaneously upon the same method. They placed the hives lengthwise, side by side, attached a cover and enclosed portico or tube to the front of each hive about six or eight inches square. The entrances lead into this anteroom by which each hive is separated from the other. This anteroom may be closed on the inside of the house apiary as well as on the outside, either by a close fitting board or a screen. The entrance of the hives is thus protected from sun and winds and may be arranged so as to open into the building or out into the open.

Editor Alfonsus adds and says that when four men hit independently on the same measure, it must be good. (The hives are also so arranged that the frames may be taken out from the side).



AMERICAN HIVES ADAPTED TO GERMAN CONDISIONS.

DR. PHILLIPS SUCCEEDS PROFESSOR BENTON.

Editor American Bee-Keeper:

Dear Sir:—I beg to announce to you that the apicultural investigations of this Bureau are now in charge of Dr. E. F. Phillips. I would also announce to you the appointment of Dr. G. F. White as an expert in bacteriology, and Mr. Franklin G. Fox as assistant in the apiary, and Mr. Burton N. Gates as colaborator in Massachusetts.

Yours very truly,
C. L. Marlatt,
Acting Chief of Bureau.
Washington, D. C., May 7, 1907.

BIRD'S NEST MADE ROUND.

The little, abandoned nest had fallen from the tree. The nature student lifted it from the frozen ground.

"How round it is" he said. "No cup rim could be rounder. Don't you wonder how the bird, with neither rule nor compass, can make her nest so round?

"Well, she does it easily. She builds the nest about her own breast, turning round and round in it, and its circular character comes spontaneously and inevitably.

"The circle is found everywhere in the buildings of the lower animals. The straight line, on the other hand, they can never achieve."—New Orleans Times-Democrat.

The slower honey comes the more gluing is done.—Grant Stanley.

ARTICLES WANTED BY THE COMMITTEE ON ADVERTISING HONEY.

The $1,408.27 raised by the Honey Producers' League has been turned over to the National Association. A committee appointed to spend that money in advertising honey and otherwise advertising its sales.

The first plan to be put into operation will be that of publishing in the general press, short articles setting forth the healthfulness, deliciousness, purity and desirability of honey as a food. The purpose for which these articles are written need not appear upon the surface. It is better that it should not appear, but there ought to be something about each article that would unconsciously lead the reader to have a better opinion of honey, to have greater confidence in its purity and healthfulness, or knowledge of its economic value as a food. That honey is not an expensive food, requires no cooking, no sweetening, nor other special preparation, but is the "whole thing" ready for use. That choice bakings sweetened with honey do not dry up as quickly as sugar sweetened goods. Also call attention to pure food laws and no adulterated honey now sold. These articles should leave the reader with his mouth watering to test the true deliciousness of honey. These articles must be short, not over 300 to 400 words and will be judged with reference to their value. (1st) Will this article attract attention and interest the general reader? (2d) Will the reader who is not acquainted with the use of honey, be likely to investigate and use honey? Of course it would be an easy matter for us to employ one man to write a series of articles for this purpose, but the committee wishes to secure the very best that the country can produce, and takes this method of inviting everybody to send in articles of this nature. Not over 400 words, perhaps less, to include the thought. Mail each article to W. Z. Hutchinson, Flint, Mich., who will read and mark according to merits. The best to be marked 10, next best 9, and so on. They will then be sent to R. L. Taylor who will also read and mark the same. He will then send them to N. E. France who will also mark them. The articles receiving the highest markings in the aggregate will be used and its author paid $5.00. Everybody is invited to contribute, no limit to number of articles each person may send in. Perhaps 30 or more articles will be used. Please write plainly on one side of paper, or better still use a typewriter if possible.

N. E. France, Platteville, Wis.
W. Z. Hutchinson, Flint, Mich.
R. L. Taylor, Lapeer, Mich.
Committee.

OUR "BELOVED PURSUIT."

J. M. WEIR.

When springtime breezes first arrive, 'tis then the denizen of the hive, or otherwise the busy bee, goes forth between cold snaps to see what the prospect is for nectar in the early apple bloom. Then the beeman's woes begin; bees have dwindled away like sin; half his colonies are dead and he "hasn't nary red;" but he fetches out the feeders from the musty honey room. Then he sells the brindle calf; spends fourteen dollars and a half for sugar at the grocery store; sells the cow and buys some more; works like sixty a week and a day to feed that cussed sugar away. Sugar all gone, no honey yet, bee-man's worried, you can bet; bees all starving, it's a plum disgrace; he goes to the grocer and "pushes his face."

Hope lives eternal in the human breast, he feeds the bees and does his best. At last, at last, the worst is past; the bees are safe from winter's blast. 'Twas ever darkest before the dawn; so he chirks right up, puts a super on. With season good and prices high, he'll get that auto, bye and bye.

But best laid plans of men and mice don't always turn out quite so nice. One day he hears an awful noise, and lays it to them horrid boys. Noise continues without cessation; he up and hikes like all creation. Runs all the way with bated breath; finds neighbor's horses stung to death. Neighbor's mad and says he'll sue. Mr. Bee-man, it's "up to you."

Fort Pierce, Fla.

We hear lots about bees being light in stores, but very little about them having too much.—Grant Stanley.

THE

American Bee-Keeper

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HOW TO ADDRESS.

The home office of the American Bee-Keeper is at Falconer, N. Y., and all matters relating to subscriptions, discontinuances, changes of address, advertising or other business should invariably be addressed to the Falconer, N. Y. office.

Matters relating to the editorial department—Manuscripts, photographs, or correspondence in any way referring to articles that have been or are to be published, should be addressed to The American Bee-Keeper, Fort Pierce, Florida.

DISCONTINUANCES.

The American Bee-Keeper will be sent continuously until it is ordered stopped and arrearages, if any, are paid. Those who wish the paper discontinued at the expiration of the time for which they have paid, have only to request that it be done, and no copies will be sent thereafter.

SUBSCRIPTION RECEIPTS.

We do not acknowledge receipt of subscriptions. Your receipt of the journal is evidence of your subscription having been entered.

When the time expires for which The Bee-Keeper has been paid, it will be mailed in a red wrapper, and the red wrapper will continue until the subscription is paid up. Subscribers will confer a favor by carefully noting the color of the wrappar used, and when the red one appears, by promptly sending renewal.

If the leather on the smoker bellows is hard and stiff, wash it with soap and water until it is soft, then while it is still miost, rub in oil or grease and it will work for another season. (M).

Save the small scraps of comb and wax, they soon aggregate several pounds in an apiary of twenty to thirty colonies. (M).

Are you going to raise a few queens for yourself this year? In the Northern states June is the best time to do it, best anyway for all but experts and professionals, and easiest for them. (M).

Not only has the New York State Association of Bee-Keepers' Societies adopted The American Bee-Keeper as its official organ, but beginning with the present number, The Bee-Keeper also becomes the official organ of the Colorado State Bee-Keepers' Association.

If the supply men have "no ulterior motives," no "axe to grind," why are they so persistently striving to obtain or retain control of bee-keepers' societies throughout the country? Their subtle use of well meaning but guileless men is oft seen, while the hand of the less scrupulous and more crafty agent is frequently in evidence. (M).

In the article on "Winter Conditions Within the Hive," which appeared in the May issue, I should have stated explicitly rather than by inference, that the cluster temperature of 64 to 74 is in the absence of brood. The presence of the latter is accompanied by a minimum of 78 degrees to 80 degrees, and a maximum of about 90 degrees. (M.)

We commend to your careful reading the article in this issue by Prof. Kuhlmann. While it is not on "practical bee culture" as that is commonly understood, it adds emphasis to the oft reiterated lesson on the need of a large population for large results. The novice must make note of the fact that the large population must be coincident with the period of bloom of the most honey yielding plants. (M).

The successful apiarist of the future must dispense with hunting for queens. In many of the practices of apiculture the necessity of finding the queens is a serious hindrance. Such searching costs in labor, in disturbance to the bees, and in other ways. Who will devise practical methods for requeening, artificial swarming and other practices which will dispense with looking for the old queen, methods which do not call for special appliances—for the benefit of the supply men. Don't be bashful, gentlemen, speak right up, we'll print it. (M).

Let me again urge bee-keepers, particularly the "little fellows," to strive to produce high quality honey rather than great quantity. It is more profitable and more satisfactory to sell a few score boxes of honey of exceptional quality and appearance than several score more of indifferent merit. The first quickly advertises the producer and he can soon command a fancy price—sometimes even double the market value for every box he can produce—and have it spoken for a season ahead—while the inferior sort is of slow sale and at small price. (M.)

A Pennsylvania correspondent wrote on May 11th that they had ten inches of snow. The same date another wrote from Connecticut, "Never saw such a cold spring. Apple blossoms not yet out at all. I am usually putting on sections May 10th." And all this time South Florida has been sweltering in torrid, drouthy heat of unusual degree. Conditions seem to be quite generally abnormal this season. May be we may have an "abnormally" heavy honey harvest in some sections. Florida, however, will not be in it. (H.)

So Mr. D. M. MacDonald still considers the bee a most industrious insect. Much as I would like to have Mr. MacDonald on my side, I cannot change my position on the bee's lack of industry, on the contrary, each day's observation but strengthens my conviction that she spends the greater part of her short life in idleness. Mr. Latham acknowledges that she is often "idle," but never "lazy," a distinction as applied to the bee comparable to the difference between tweedledee and tweedledum. However, I am not alone in my position, as will shortly be shown in these columns. M.

One man's deductions from observed facts are often diametrically opposite to another person's interpretation of the same facts. M. Bonnier is quoted as saying that bees send out scouts to search for honey, pollen, etc., and that on their return from a successful quest they inform other occupants of the hive and direct them to the treasure. The writer ventures the assertion that the individual bees start forth each of her own volition and that when one returns loaded with the spoils of the field, the odor of her load excites other bees who start out seeking the same odor. As their sense of smell is exceedingly acute, it is quite possible that one or more bees will follow and keep track of a bee going from the hive to the source of her plunder. (M).

APIARIAN DEMONSTRATOR WANTED.

At the next meeting of the Colorado State Association, it is desired to present a practical demonstration of methods of handling live bees, the operators to illustrate their methods of increasing colonies by artificial means; treatment of foul brood, manipulating supers in comb honey production, and other exercises that may tend to interest and instruct the public.

If any reader of The American Bee-Keeper is in a position to make a creditable exhibition on this occasion, along the specified lines, write to Secretary S. Francis, Erie, Colo. The present is none too early to take up the matter with Mr. Francis, and formulate plans for a thoroughly good demonstration. (H.)

JUDGING COLONIES FROM THE EXTERIOR.

Let this season's close find you better skilled in judging the condition of your colonies by external appearance or by mere superficial examination from top and bottom of hive. To have all your colonies of one strain of bees and to know the peculiarities of that strain, greatly facilitates such judging.

How shall you learn? Well, look at the entrance of some colony, are they more or less abundant than at most of the others, are they going and coming more frequently or are they standing around listlessly? After trying to fix the appearances in your mind try and decide what they mean, that is to say, is the colony strong, medium or weak? Has it the snap and go of a stock in thrifty internal condition? If you know the age of your queens—as you should—you can make a pretty shrewd guess as to whether she is up to par or not. After you have made up your mind as to what you believe the internal conditions are, open the hive and see how near you came to the facts. Repeat until you can hit it most of the time. (M).

WRITING FOR MONEY.

The American Bee-Keeper quite often receives inquiries something like this: "I see you want articles on bee-keeping for publication. I have been keeping bees for several hundred years, know more about the business than the man that killed himself working with bees, and my capacity for turning out manuscript upon the subject is ample to supply several newspaper syndicates. How much are you willing to pay to secure the services of an expert of the aforesaid calibre? I might be induced to consider a proposition along this line if the cash inducements are sufficient."

One aspirant, more modest than the average, advises The Bee-Keeper that he has kept bees five years, and that he is willing to help us out on material for publication if we will advance the price of a typewriter and accept his productions in payment.

We have said before, and we repeat with emphasis that we want good material for publication. This does not necessarily imply that we are "shy" on space-filling stuff Not to exceed one-half of the material submitted finds its way into type.

There is probably not a periodical publication on earth that would contract for material from an unknown writer, and The Bee-Keeper is no exception. If anyone thinks he has in mind material for a good article for publication, let him write it out in the plainest language possible and send it to The Bee-Keeper, and either state the price at which he is willing to sell, or leave the matter of compensation to the discretion of the editor. The latter is the usual way.

In conclusion it might be well to impress upon all who seek high honors in the literary world that the bee journals afford a mighty poor field for cultivation, as the rates of payment are generally low and not at all commensurate to the merits of very high-class stuff. The Ladies' Home Journal, Scribner's Magazine, Collier's Weekly, and such publications pay much better, and The Bee-Keeper advises those who seek a lucrative literary life to send their productions to periodicals of this class, and not to any apiarian journal. It don't pay. (H.)

PERTINENT PARAGRAPHS.

GRANT STANLEY.

It is said queens of the current year's rearing will not swarm that season, but of course such queens must be reared in these colonies.

Dr. Miller says in his book, "Forty Years Among the Bees," that when more than one egg is found in queen cells, laying workers are present.

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For hundreds of CASH BUYERS, who advertise in THE U. S. REAL ESTATE JOURNAL and THE PROSPERITY MAKER, a unique, original, illustrated monthly for the Home, Real Estate, Business. For wide-awake buyers, sellers, agents, investors. A world wide circulation. Sample copy, 25c or $1.00 per year. Free advice. Write J. ALLEN STEPHENS, Publisher, 18 Willard Building, Muncie, Ind. Est. 1892.

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68 Thompson Bldg., Scranton, Pa.

HONEY AND BEESWAX MARKETS.

(Dealers' Selling Prices.)

Worcester, Mass., April 16.—The supply of honey has been all cleaned up. There has been quite a call, but have had none in stock. W. H. Blodgett & Co.

Kansas City, Mo., April 15.—Supply and demand for honey are still light. We quote today: No. 1, per case of 24 sections, $3.25; No. 2, $2.50 to $2.75. Extracted, white, 8c to 9c; amber, 7c to 8c. Beeswax, 27c to 30c. C. C. Clemmons & Co.

Kansas City, Mo., April 8.—Both demand and supply for honey are light. We quote No. 1 white comb, 24-section case, $3 to $3.25; No. 2, 24-section case, $2.50 to $2.75. Extracted, white, 8c to 9c. Amber, extracted, 7c to 8c. Beeswax, 25c to 30c. C. C. Clemmons & Co.

Milwaukee, April 16, 1907.—The demand is fair. We quote our market today as follow: Comb. Choice to Pansy White 16 to 17 cents; Extracted, 8 to 9 cents; Beeswax, 28 to 30 cents. J. Offermann & Co.

Denver, April 16, 1907.—The supply of comb honey is very light. The demand is slacking up. We quote our market today as follow: Comb, No. 1 white, $3.20; L. Amber, $3.00; No. 2, $2.80 per case of 24 sections; Extracted, 6 3-4; 7½ for Light Amber; 7½ to 8 for white. Beeswax wanted at 26 to 28 cents per pound delivered. The Colorado Honey Producers' Assn.

Chicago, May 9.—Very little honey on the market of any kind. Prices are therefore nominal. A little choice white clover comb sold at 17 cents per pound and would bring that at present, but supply seems to be exhausted, even with this scarcity there is no demand for number two grades. Extracted white 7 cents to 8 cents, amber 6 cents to 7 cents. Beeswax in good demand at 32 cents per pound. R. A. Burnett & Co.

Cincinnati, May 23.—There is no material change in the honey market at this writing. Quote amber in barrels at 5 1-2c to 6 1-2c. Fancy table honey in crates of two 60 lb. cans, 8c to 9c. For choice yellow beeswax, free from dirt, we are paying 31c cash and 33c in trade, delivered here. The Fred W. Muth Co., 51 Walnut St.

There is a big difference between queen rearing and queen breeding.

Cent-a-Word Column.

DO NOT burn your refuse from Wax Extractor. Send it to me and get your cash. Archie L. Coggshall, Groton, N. Y. tf

AGENTS WANTED—To sell advertising novelties, good commission allowed. Send for catalogue and terms. American Manufacturing Concern, Falconer, N. Y.

FOR SALE—45 colonies of bees, excellent strain, no disease, several hundred hives, foundation mill, dipping tank, Cowan honey extractor and numerous other appliances. Located in Florida. Cheap for cash. Address, S. B. C. Care American Bee-Keeper, Fort Pierce, Fla.

INCREASE is a hadsome little book telling how to form new colonies without breaking working stocks. A simple, sure, satisfactory plan, 25c. Baby Nuclei tells how to mate many queens from sections with a mere handful of bees; 42 pages, 20 pictures, 50c. Cell Getting tells how to save labor in rearing queens, 50 cents. Queen rearing outfits. Golden all-over and Caucasian Queens. Circulars free. E. L. PRATT, Swarthmore, Pa.

WANTED.—No. 1 white and amber and buckwheat extracted honey in 60 lb. cans or barrels. Send sample and quote lowest price delivered in Preston. M. V. Facey, Preston, Fillmore county, Minn.

WANTED—Bee-keeper. State age, experience, and lowest wages in first letter. W. Hickox, Berthoud, Colo. June 7.

QUEENS SENT ON APPROVAL—After June first, I will mail a few queens, with escort of their own bees, for inspection. If you are pleased with queen, send money order for $1.00, if not pleased, turn over address and leave in office for return mail. These queens are carefully bred from a very hardy strain of bees. A. M. Applegate, Reynoldsville, Jefferson Co., Pa. Jy. 7

HONEY DEALERS.

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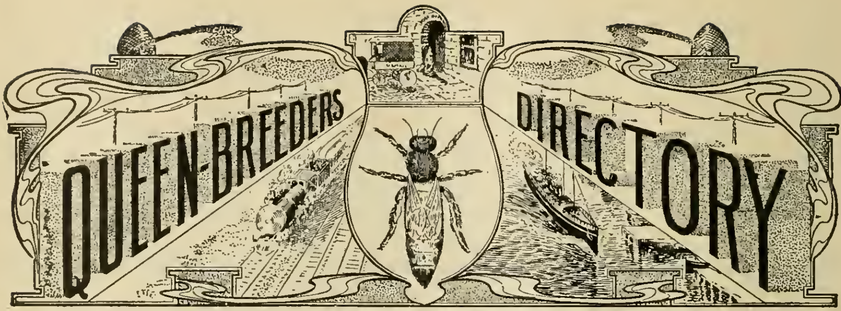

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BETTER THAN AN ISLAND—No other bees within five miles. All fast trains stop here. I consider the Banat Caucasian bees the best and gentlest in the World. One colony made 32 fancy sections of comb honey during September, seventy Italian colonies did not make a pound. Banat Caucasians bred here, other races in out yards. Banat Caucasian queen $3.00. Caucasian queen $1.50. Golden Italian 75 cts. Order now D. Collins, Ph. D., Emporium, Pa.

THE A. I. ROOT CO., Medina, O.—Breeders of Italian bees and queens.

QUALITY QUEENS are the best Italians yet. Send for circular. H. H. JEPSON, 182 Friend street, Boston, Mass.

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W. J. DAVIS. 1st YOUNGSVILLE, PA. breeder of choice Italian Bees and Queens. Quality, not quantity, is my motto.

ITALIAN QUEENS AND BEES. E. E. Mott, Glenwood, Mich. Money Order office, Decatur, Mich. Jan. 8.

BUY YOUR QUEENS from the Red Clover Apiary. Bees guaranteed to work on red clover. Fine 3 and 5-banded untested Italian queens, 60 cts. Tested, 75 cts. If wanted before June 25, add 15 cts to above prices. J. L. Fajen, Alma, Mo. Dec. 7.

ITALIAN QUEENS before July 1st untested $1.00 each; 6 $5.00 warranted. Tested $1.25 each; 6, $7.00. Caucasian queens untested, $1.20 each; 6, $6.00. Warranted tested, $1.50 each; breeders $5.00 each. Bees kept in seperate yards and the best of care used in rearing same. Price of nuclei and queens in quantity given on application. Order now. Circular free.
D. J. Blocher, Pearl City, Ill.

JOHN M. DAVIS, SPRING HILL, TENN.—Has greatly enlarged and improved his queen-rearing facilities. Two unrelated Carniolans and a dark leather Italian lately imported. My own strains of three-band and golden; "Moore's" long-tongue; Doolittle's golden; all selects. Carniolans mated to Italian drones when desired, No disease. Circular free.

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MY GOLDEN ITALIAN breeding queen produces bees that do not know enough to stay in the hive when it rains. They are hustlers. Caucasians, bred from an imported Queen. Queens mated in yards 6 miles apart. Satisfaction and safe arrival guaranteed. Both queens and supplies are A No. 1. Agents for The W. T. Falconer Mfg. Co's be supplies. J. R. Rambo, Collingdale, Pa.

IF YOU WANT BEES that winter best, build up early in the spring, the best comb-honey bees, Get my Improved Carniolan Queens, They do business, [Italians for those prefering them.] Catalogue free. W. W. CRIM, Pekin, Ind. Feb8

ITALIAN and Carniolan Queens. One and two-frame nuclei, untested either 3 or 5 banded, 75 cents each. Tested, $1.00 This includes Carniolans. One-frame nucleus 75 cents. Two-frame nucleus, $1.25. Write for particulars.
C. B. BANKSTON & CO., San Antonio, Texas.

ITALIAN AND CAUCASIAN QUEENS and bees; best stock and no disease. My circular is free, and courteous treatment is given all correspondents and patrons. Write me of your needs. A. E. Titoff, Ioamosa, California. Oct. 7

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To the person who will secure the greatest number of starters in sections in fifteen minutes, using one of my new foundation fasteners, I will pay a reward of $5.00.

This reward is offered to establish a record. I have had many flattering reports, both as to the quality of the work done and the rapidity with which the machine can be operated. But I believe a better record can be made.

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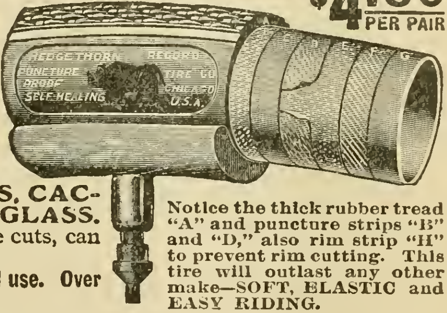

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The Modern Farmer and Busy Bee	$ .25
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Kimballs' Dairy Farmer	.50
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Our price for all of these one year only, $1.15.

Write for sample copy and other clubbing offers as good or better.

The Modern Farmer

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Clean-Cut Christian Men and women wanted in every community to work for us if they are desirous of earning from $100 to $500 per month honestly. If you mean business and have an acquaintance, and can meet above conditions write us at once.

HENRY L. PEABODY,
761 Commerce Bldg., SCRANTON, PA,

June 7

HOMES In Old Virginia

It is gradually brought to light that the Civil war has made great changes, freed the slaves, and in consequence has made the large land owners poor and finally freed the land from the original owners who would not sell until they were compelled to do so. There are some of the finest lands in the market at very low prices, lands that produce all kinds of crops, grasses, fruits, and berries; fine for stock. You find green truck patches, such as cabbage, turnips, lettuce, kale, spinach, etc., growing all the winter. The climate is the best all the year around to be found, not too cold not too warm. Good water. Healthy. Railroads running in every direction. If you desire to know all about Virginia send 10c. for three months subscription of the VIRGINIA FARMER to Farmer Co., Box 604, Emporia, Va.

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John W. Hann

WAUNETA, NEBRASKA

DANZENBAKER PRIZES

It is to be regretted that so many bee-keepers are satisfied to produce year after year a very ordinary grade of honey as regards its appearance, when by a little more care, and having more suitable fixtures, and by taking the honey from the hive at just the right time, a much larger percentage of "fancy" or "extra fancy" honey could be produced, which would sell at a much higher price. The experience of honey-merchants generally is that there is no difficulty in disposing of large stocks of fancy or extra fancy, even when the market is dull. It is the inferior grades that suffer most at these times. We believe, too, that bee-keepers would be very much better satisfied with their season's work if their best efforts were made to produce a really fine product. To increase further the interest in extra fancy honey, the following prizes are offered for honey produced in Danzenbaker hives during the year 1907, under the following conditions:

FIRST.—As above stated the honey must be produced in a Danzenbaker hive, either the present style or any Danzenbaker hive that has been put out within the last few years. These hives may be had of any dealer in bee-keepers' supplies in any part of the country.

SECOND.—For Classes 1 and 2 we require a shipment of approximately the amount stated, to be made by the bee-keeper direct to us at Medina. After the prizes have been awarded the honey entered for competition in Class 1 or 2 will be held subject to the instructions of the producer. We will sell it at a five per cent commission or we will ship it to any point direct by freight or express. There being good honey markets in our immediate vicinity as Columbus, Cincinnati, Cleveland, Buffalo, and Pittsburg, it can be disposed of without difficulty at good market prices, and the shipper will not have to lose a good market by shipping it here. Neither the honey awarded a prize nor that which obtained no prize is to be our property, but will be sold subject to the instructions of the producer who sends it to us. We are interested only in inspecting it to award the prizes.

THIRD.—For all honey submitted for prizes we must have a definite statement from the producer regarding the conditions under which it was produced, whether a light or heavy flow of honey, how the colony was handled, how many colonies in the yard, from what source produced, etc.

FOURTH.—For Classes 3, 4, and 5, we must, in addition to the above report have the signature of two witnesses certifying to the correctness of the report. If the party who sends us the report for the competition is well known to us we shall not require these witnesses. References may be given instead of the signature of witnesses if desired. All parties intending to compete for these prizes should send for blanks which we will furnish, on which the report may be made out.

FIFTH.—It will be noticed in the last three classes, three to five inclusive, that it is not at all necessary to send us the honey—all we require is a report.

SIXTH.—We reserve the right to limit the number of awards in each class, or to make no awards in a class if there are no satisfactory entries for the same.

SEVENTH.—No contestant will be awarded more than one prize in each class, but may make two entries if desired—one in Class 1 or 2, and another in Class 3, 4, or 5.

The classifications for the prizes are as follows:

Class 1.—For best shipment of 200 lbs. of comb honey in Danzenbaker hive.
Class 2.—For best case of comb honey in Danzenbaker sections.
Class 3.—For best report of yield from single colony in Dazenbaker hive.
Class 4.—For best report of yield from five colonies in Danzenbaker hives.
Class 5.—For best report of general results from use of Danzenbaker hive.

For each class there will be ten prizes as follows:

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The American Bee-Keeper

JULY
1907

Fort Pierce, Fla., - Falconer, N.Y.

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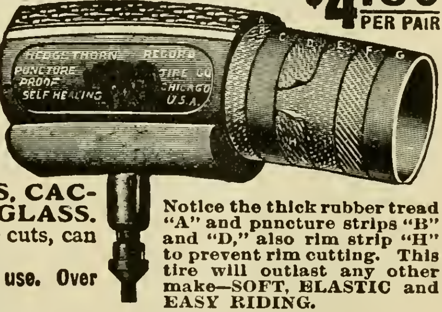

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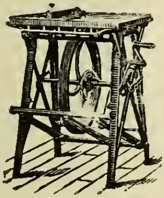

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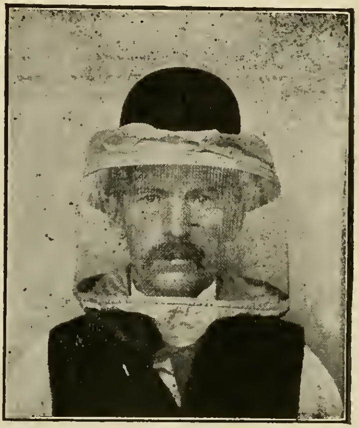

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The Fred W. Muth Co., Cincinnati, Ohio. Denver, June 7, '07.

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FRANK RAUCHFUSS, Mgr. The Colorado Honey Producers Assn.

Everybody knows Mr. Rauchfuss—and he wouldn't recommend anything in such strong terms if it wasn't the **REAL** thing in every particular. It only costs you 75c. post paid. Unless you enjoy being stung while handling bees, send for this veil **TO-DAY.** Send for our catalog, free.

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THE AMERICAN BEE-KEEPER

Entered at the Postoffice, Fort Pierce, Fla., as second-class mail matter.

Vol. XVII. JULY, 1907. No. 7.

REPORT OF THE COLORADO STATE BEE-KEEPERS' ASSOCIATION.

ADDRESS BY PRESIDENT COLLINS.

THE ASSOCIATION, to my view, should turn all its energies to the question of a more perfect organization. The productive activity in every industry throughout the whole country and throughout the whole world turns to the question of co-operative organization. It seems to be the one subject of all productive forces, and, in fact, all other forces of society, to become more perfectly organized, and if we are to receive the greatest benefit possible for the organization it must come out of the thought that is today governing all lines of action—co-operation.

Progress in all cases, in every branch of the social or economical relation of human beings has adopted the mode of co-operative organization to further its interests. It is realized by everyone that the greatest good to the individual can be obtained only through the greatest good to the greatest number, and the greatest good to the greatest number is invariably brought about through co-operative action and organization; and it is a fact that if I wish and desire the most and best for myself I can get it only through securing to each and every member of the society the greatest and best for them, and I believe that the Bee-Keepers' Association can more thoroughly and perfectly realize the object of the Association in the more perfect and thorough organization of the bee-keepers of the state.

You can go back not very far when we reach the stage of practically no organization of society save the crudest form of co-operation, experienced in the local political organization, we will find the last performing their work individually, each one striving for himself and gaining what he can for himself.

There are hardly any lines of thought without co-operative organization work along that line, and in most of the states co-operative organizations and insurance companies spend most of their time trying to keep up with this thought. Our members also, have so many different organizations that they cannot find time to attend same, but through this organization only can we realize the benefits that we now receive, and through perfecting them only can we reach higher and higher benefits than any industry has known or realized in the past, and I believe the time will come when, through perfected organization, we will produce more honey to put on the market than the world has ever dreamed possible to do; but we can only do it through harmonious action and all pushing to the one proposition of the most proficient work on the part of each individual in the organization representing our industry. It may be stated that we have reached a productive capacity that cannot be excelled. I am one of the belief that there is nothing so good that it could not be made better; the only question is the knowledge of how to do it. I think the outline that I have given to the Bee-Keepers' Association and the members here assembled will be the outline that I desire we should work for, for the coming year, and the only way of making that work most effective, and the reason I do not suggest any other lines, is because it can only be made so by turning one's whole energy to the one line of thought. When I was keeping a farm and bees, the production of those bees per unit was very much less than when I turned my whole attention to the honey industry. Let us turn our attention to the perfecting of the Association and give it all that one thought for this year, that we bring the organization to the greatest point of proficiency that it has ever reached.

Committee to decide what the premium should be, party to receive the prize of putting up sections in section contest, and also to award the premium.

Committee: R. H. Rhodes, A. F. Foster, D. Moon.

Question: "Is it correct to say and teach that a queen does the best work in her second year?"

Mr. Collins: I get the best returns from a queen that is one year old. It would be a queen that is hatched under ideal conditions before the honey flow and does practically the first season's work, or a queen that is hatched just at the opening of the season. I get a hive full of brood for her to get working on.

Mr. Gill: "By their work ye shall know them." I think it will hold good in queens as well as anything. If a queen is three years old and don't give the best satisfaction, say, at the time when flow commences, it is always shown by the condition of the brood, and I would dispose of her. I would rather have a queen two years old then. As long as a queen is doing satisfactory work with me I care not whether she is two years old. I have always found satisfactory work with queens that are reared under proper conditions.

Mr. Jouno: It seems to me that a queen can not do her best the first season, as her bees are to late for the honey flow, but otherwise I think that the second season is best for queens.

Mr. Frank Rauchfuss: The way I understand the question, suppose your queen is reared during June, naturally it would not be a year old until the next June, which would be two seasons, so there is a little distinction in that.

Mr. Gill: I stated that if a queen works satisfactorily she can remain with me. I was well aware of the fact that it meant one year, but if the next season her work is unsatisfactory I mean to dispose of her, the month of August next, the time that you need her the most she fails. I have some of the very best work I ever had done with queens second year. Keep close to nature you are the best off. There is one thing perhaps I am alone on. I have a strain of bees that work a long time without a queen, which is pretty well filled with brood, and I have had strains of bees that had no queen for ninety days, and still have bees. I know that there is a race of bees that live forty-five days. It is those bees that are most industrious and have the best wing power and the longest life that get our honey.

Mr. F. Rauchfuss: I have brought up this question in former years. It was about twelve years ago I had a hive south-east of Denver on a farm. It was by an accident that I put this hive on a scale; it was the most convenient for my shop, and I have kept this hive on a scale for seven years. There were four queens, the original queen lived four years, the other three were the daughters of that queen. The stock was only a dark Italian, and could you look into the hive during the season you would have found five frames of brood, but those five frames of brood were five frames of brood good and solid; at the same time the hive was always full of bees, there was nothing in the yard that could compete with it. I had several hives in the yard that would give more honey than the scale hive, but one year with the other the scale hive was away ahead; which points to the fact that good queens are essential.

Mr. Gill: There is one question I would like to bring up. In 1880 I got some queens; they were imported; there is one of them I got from Mr. Burt. I got some queens from him and they were Italians. They were very dark, and cost me $6.00. They never were very strong in brood, but when they had five or six frames of brood it was brood. They were very industrious. I know that they lived sixty days. I had a colony of bees that got me 32 pounds and 18 pounds after 2 o'clock. It was one of those peculiar days that one may experience now and then. One colony of bees got me 325 pounds of ripened honey in 21 days.

Mr. Wilson: Mr. Gill reports that a colony of bees of his got him 325 pounds of ripened honey in 21 days. It is peculiar about it. They don't come circling around and after a while go in, but go direct. They get the honey, strong in wing power and long life. Never hang out in the summer.

Mr. H. Rauchfuss: Discussion is that the queen does her best work in the second year. Why, no! I don't think so. I think they do just as well in the first year, and even do as well when they are three years old, but we take it for granted that the young queen lays more eggs than when in her second or third years.

Mr. Collins: I had two yards that I had the side of my hives marked, date of the hatched queen, date by season. Those two yards show that the queen hatched before the season began and a queen that was hatched the year before compare about the same. The poorest I got was two supers from the queen two years old. The best I got was five or six supers. The poorest I got was one, and the best I got was three supers, and from that down, from queen three years old. The queen four years old from two supers down to nothing, and died without superceding. They were in different locations. It thoroughly convinces me that the young queen is the best.

Mr. Wilson: You lay that to the age of the queen, or would you not lay it to the location?

Mr. H. Rauchfuss: I believe there are other things to take in consideration, and the age is not so much the cause of it. You can have a good colony of bees, and you might think the queen would be good and works good, but she might produce very poor queens. I think it would be best to take in consideration if a queen produces good queens and that takes two or three years before you know you have a good queen, and she is then pretty near ready to die. You never know where your good queens are. It is to get the good queen, and if I had a good queen I certainly would not supercede her. I mark the hives every year and see how many supers of honey they get, and if it is more than the average, that queen stays in there until she gets pretty old, but when they produce less than the average I kill them if they are only one year. Or if the queen does good work I don't care whether she is five years old, I will keep her.

Mr. Collins appointed the following committee to draft a set of Rules and Regulations for conducting the section contest.

Committee: Mr. Gill, Frank Rauchfuss, S. Francis.

Made the following rules and regulations for section putting up contest:

First: Persons wishing to compete should make entry before 5 o'clock today.

Second: The number of supers to be put up by each contestant will be fixed by this committee.

Third: Every contestant will be furnished sections all alike in quality and conditions, also foundation.

Fourth: Contestants are required to put in top and bottom starters.

Fifth: Points to be considered by the judges are quantity and quality of work done.

Sixth: The quality of the work should be further determined by pulling of foundation and examining the folding of the sections.

Seventh: The cutting of the foundation by contestants should be part of the contest, but not to be considered in the awarding of the prize.

Eight: One of the judges to act as time keeper.

Nine: Prizes should be awarded before the close of morning session.

SECRETARY'S REPORT.

Stationery and Subscriptions	$21.95
Paid Treasurer	7.00
	$28.95
Bill of Secretary:	
Balance due on supplies	5.70
Salary on 60 members	12.00
	$17.70
Received Membership	$23.25
Balance on hand	5.70
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TREASURER'S REPORT.

Cash on hand	$22.17
	$22.17
Cash received	$ 7.00
Cash on hand	.92
Total cash on hand	$ 7.92
Cash paid out	$ 5.00
Cash paid out	16.25
	$21.25
Cash on hand	.92
	$22.17

REPORT OF COMMITTEE ON CUBAN HONEY.

Mr. F. Rauchfuss: I report the conditions that I had found the previous year. The past several months I made a visit through the middle states, and visited some of the honey merchants again. I have not found the Cuban honey in the comb, but some extracted honey shipped in right along. We find that it averages about 200 barrels a week, weighing about 500 or 600 pounds, ranging in quality from white to a very dark amber. A good many of those that had gone into the business there have given it up again for personal reasons, or for business reasons. There are a few people there that are making a good thing out of it. I happened to speak to a bee-keeper that had been in Cuba and examined the conditions there, and as for him he would rather be excused from keeping bees there.

LEGISLATIVE COMMITTEE.

Mr. F. Rauchfuss: I want to call the attention of the members of the Association to the fact that there is a pure food law before the legislature; that it behooves us as bee-keepers to find out what this pure food law is, in fact, to get a printed copy of it, that we ought to be able to secure before the convention is over, and then it might be well to see if honey is included in the law. The present State Dairy Commissioner is supposed to be a chemist, and also the deputy is reported to be a chemist, and these two chemists should be posted on the matter of analyzing the honey and for the carrying on of other work, there is hope that our pure honey law which has been a dead matter will be brought into force. Mrs. Wright, the former Dairy Commissioner, has met with bee-keepers and associations and stated that she is willing to do her part in having samples analyzed; however, the legislature did not allow anything for the carrying out of that work.

Motion made and seconded that the report be accepted. The committee continued, and to report at our next session.

EXHIBITION COMMITTEE.

Committee: A. Elliott, S. Francis, F. Rauchfuss, F. Drexel.

Mr. F. Rauchfuss: The committee on exhibition has, during the early part of the season, sent out requests to a great many bee-keepers of the state to prepare the exhibits for the coming state fair. It was held at Pueblo last fall. There was not a solitary one to make an exhibit of the bee-keepers of this Association.

Mr. Devinney: I like the report very well, but I don't like the results of the work. I, therefore, move that the report be accepted, and committee be discharged.

Mr. F. Rauchfuss: I think the bee-keepers are not doing the square thing by the committee. It is not right; you are all obliged to help our Association along and our industry by making some kind of exhibit, and you ought to lend a helping hand to the committee when they are willing to do something. You don't have to go into your pockets very deep, and if every one does something we will have a fair exhibit. Now, I can speak from personal experience; the exhibit of honey and beeswax at our state fair has paid every person that had done anything, in the way of premiums and reputation as an up-to-date bee-keeper.

Mr. V. Devinney: I was down to the St. Louis Fair, and honey there was not marked with producer's name, and the reason perhaps that there had been a delinquency of making exhibits has been on account of that. I think a better way to make an exhibit is to take perhaps six pounds of honey as sample of honey produced by so and so of two tons of honey, or whatever amount.

(To be Continued Next Month.)

The best is always the cheapest. This particularly applies to the bee-keeper.—Grant Stanley.

REASON, AS OF BEES AND MEN.

C. W. DAYTON.

IT WOULD not be the good part of wisdom to think that, because the question as to whether bees think or reason has been examined and discussed by a few leading apiarists that the matter is decided and settled. The foremost philosophers of our day admit, after a generation of discussion, that the matter has been advanced no farther than suppositions or hypotheses as to whether man himself has reason. The only approach to satisfactory settlement is that man possesses self-consciousness, or, intellectual consciousness of self. There are many high authorities that hold that the self-consciousness of man is the same kind as in the lower animals differing only in degree. There have been innumerable arguments brought up but when examined from different points of view have always been knocked topsy turvy. The field in which to win fame in this branch of the philosophical world is, therefore, as broad as ever.

Nor need importations from Germany or other favored climes deter us from making a local effort. German people freely admit that merchandise sent here and sold at fancy prices would be scorned to be used at all back in Germany. We know, all too well, that articles made to be sold are never so perfect as when intended for home consumption. Even our bees which were obtained fifty years ago and that we confidently expected to improve and develop are still being imported from the same locality as the early importations. What has discussion developed in the matter, if it has not incited action? Beginners have stood still and waited, or perchance, risked their savings for high heralded improvements whose commotion was in the coming and the going.

Man may be self-conscious of other animals and their acts but man can never be self-conscious for other animals. Consequently man can only compare the actions which may be conscious to other animals with those actions which are conscious to himself. If the actions are identical then it can be calculated that the causes which excite the actions are also identical and are performed through the same method of reasoning.

To determine or contemplate the consciousness of bees in comb-building is equivalent to exercising consciousness for them, or in their stead. Men do not build combs. Man cannot exercise consciousness in actions he could not perform himself. Man may be conscious as to when or where man desires combs to be built but the bees' consciousness may be at variance; and the consciousness of the bees may be in accord with nature. Self-consciousness is not transferable. except by a change brought about by artificial actions and then it is not consciousness. It is a faulty course of procedure that may admit of toleration but not of actuation. Below are some examples I deem as applicable in the case.

On page 241 of the November issue I mentioned having some nuclei in the house to introduce queens by the hatching-brood plan. It was so cold weather that some unsealed brood in the out edges of the combs became chilled. Hold this fact for use later.

Case No. 1.—There are many Mexican hornets here. There was a dish of honey on the table which the hornets found. They find such things sooner than honey bees. After the hornets had helped themselves for two or three days (four hornets) I set the dish outside to be cleaned off by bees. When the bees had gotten a good start I set the dish back in its former place and the hornets and six or seven bees continued to carry the honey away coming in at the door and going out at the window escape.

I noticed that every time a hornet returned for a load it first went around and smelled of every honey bee on the dish before taking a load of honey. I connected these actions with other actions I have seen out of doors about the bee hives, so I daubed a bee with honey so it could not go home. The next hornet attacked this bee and other hornets also as they came but the bee fought and got free. Then another bee was daubed, and that was tackled by hornets the same as the other. Thoughts preceded acts. One of the dead larvae was brought and a small amount of its substance was smeared on the backs of the two bees.

When a hornet returned it attacked a bee in rough and tumble manner and other hornets soon joined in and pounced on both bees as soon as they came. They clipped off legs, wings, heads and stings and then cut the bees up and carried them home (as a substitute for pollen), leaving the dish well strewn with gore.

When the hornets returned they examined the honey bees as usual and then began to load up with honey. As the other honey bees returned they began to smell about the plate in a suspicious manner. Suspicions increased rapidly into threatening movements. The more they saw the hornets the more exasperated they acted. They refused to load up until the hornets had been driven off the dish. They became anxious to fight and the hornets were attacked if they ventured to touch the honey. Toward fall hornets always begin their work of robbery and depredation about the hives, butchering every crippled bee they catch out alone. Good Italians notice this and will not allow them about the entrances and will follow and attack them on the ground. They are more than a match for a hornet when they go out for "game." In the above case I believe they would not load up until the hornets were away for fear of being killed.

Case No. 2.—I said that the brood was chilled. It was not so much because of the cold weather as because it was difficult to get much hatching brood in a comb at that season, as there was not much breeding going on and I was obliged to use more combs to get the requisite amount.

When the nuclei were set out of doors robbers poured into the hive containing the chilled brood but none of the other nucleus hives. I looked into the hive to see how the robbers were treated. There was not the least bit of fighting and the robbers were helping themselves to the cells of honey even in amongst the cluster of young bees. The hive was returned to the house again. The next day it was again set out of doors. I left the vicinity for about thirty minutes and when I returned there were about 200 robbers getting busy. This time when I looked in the young bees were running here and there in a frantic manner and grabbing and pulling at every robber they could reach. The robbers seemed to pay but little attention to the young bees but nosed along until they got a cell of honey where they continued to load up often with two or three young bees endeavoring to pull them away. The bees of the hive were whitish yet and could not make much resistance.

Now I believe the reason they did not fight on the first day was because they did not know what robbing was, but after the first fracas and they made the discovery that their honey had been daubed about and cells lowered and films disordered, they began to get "learning." "Education."

Robbers were bound to get at those combs containing chilled brood so they were exchanged for fresh combs of brood. This immediately ended robbing in that hive. I placed one of these combs in the upper story of each of three other colonies. Robbers continued for days to smell and pull at the cracks between the covers and supers of each colony where the combs of chilled brood were put in. And the hives and supers were very close fitting. But no robbers went near the entrance. No robbers went on the side where the entrance was. Each colony had a thrifty young queen, I attribute as the cause of this. If the bees of the hive saw robbers they were obliged to come out and look on the rear of their hive. The entrance consisted of a single one-inch auger hole. In less than a week each colony closed the entrance with propolis so that only one bee at a time could pass. The propolis was put on in the shape of a cone with the small end turned toward the inside of the hive. No other colony in the apiary has contrived any such barrier although about 200 colonies have three inch-holes wide open. There is some philosophy in the shape of the cones and all of the three colonies philosophised alike. The cones provided the widest range of vision combined with the greatest protection to an individual bee standing in the opening. A robber could be seen as it traversed the length of the cone. It was like a man poking a gun over a parapet. It reminded me of General Jackson at New Orleans.

They were obliged to come out of the hive and go around it in order to see the robbers. Then go back with the memory of robbers, and the realization of the results of robbing, and then go about devising means for more complete protection as well as to gather the material for its construction.

Chasworth, California.

HOW THE QUEEN "KNOWS."

DR. C. C. MILLER.

THE AMERICAN BEE-KEEPER has the following:

"If there is drone comb in the supers the queen is almost sure to go up" says Dr. C. C. Miller. I would like to ask him how she knows it is there? To help him answer I will whisper to him that the queen in the course of her rambles visits in the course of a few days pretty nearly every nook and corner of the hive. (M.)

Admitting the rambling character of the queen, Brother M., don't you think she has advance agents to prepare for her coming? I've sometimes seen empty drone cells in sections, and also outside of the brood-nest in the brood-chamber, apparently ready for the coming of the queen. Certainly looks as if the workers had a say in the matter, doesn't it? And don't you think it possible that the queen knows about those empty cells only because a deputation of bees formally notified her?

The American Bee-Keeper, if I understand it correctly, holds that although a colony of bees may accomplish a lot of work, each bee, as an individual, instead of being a pattern of industry, is rather inclined to laziness. According to that, when a bee is among the posies out from under its mother's eye, one would expect to see it do a lot of loafing; yet I have been in the habit of thinking that any bee was a sick bee when not in active motion away from the hive.

Marengo, Ill.

If you know when you are well off, better protect yourself pretty good before re-opening the entrance of bees that have been moved some distance, as they sometimes seem to be right on their "metal."

INJURY OF FRUIT BY BEES?

W. R. GILBERT.

DURING the fruiting months that hardy annual, "The Bees, Injuring Fruit," comes up, and many non-observing persons put the blame for the work of the fly, wasp, and ants down to the credit of the hardworking bee. This would be all right if the work done was meritorious instead of being mischievous. I have always contended that the bee is the greatest friend that the fruit grower has, and that the nearer the orchard to the apiary the heavier the crop of fruit. Such being the case I am glad to quote the official experiments that have been carried out on the Canadian experimental farms to test the accuracy of the allegations as to bees injuring sound fruit.

Experiments were made with ripe fruit of four different kinds, peaches, pears, plums and grapes, exposed in different places in or near the experimental farm apiary where it was easily accessible to the bees. The fruit was exposed in three different conditions: 1. Whole, without any treatment; 2. Whole, after having been dipped in honey; 3. Punctured in several places with the blade of a penknife. Four colonies were selected for this experiment, all of about equal strength, each in a hive upon which was placed a super divided in the middle by a partition. From two of the hives the honey had been all removed, in the two remaining hives five frames were left, each having considerable brood with honey around it. In each of the four hives, the whole specimens of fruit not dipped in honey were hung within three empty frames, tied together as a rack; the whole specimens of fruit dipped in honey were placed in one compartment of the super, and the punctured specimens were placed in the other. The bees began to work at once upon both the dipped and the punctured fruit; the former was cleaned thoroughly of honey during the first night; upon the punctured fruit the bees clustered thickly, sucking the juice through the puctures as long as they could obtain any liquid. At the end of six days the fruit was all carefully examined. The sound fruit was still uninjured in any way; the dipped fruit was in a like condition, quite sound, but every vestige of the honey had disappeared; the punctured fruit was badly mutilated and worthless, whilst beneath each pucture was a cavity, and in many instances decay had set in. The experiment was continued the second week; the undipped sound fruit was left in the brood chamber, the dipped fruit was given a new coat of honey and replaced in the super, and a fresh supply of punctured fruit was substituted for that which had been destroyed. At the end of the second week both the undipped and the dipped specimens of fruit that were sound at the end of the first week as well as the punctured specimens, were considerably decayed, and where there were openings in the skin, showed signs of having been worked on, though to no great extent. The experiments were continued for a third week, at the end of which the bees in the two hives which had been deprived of all their honey, appeared to be very sluggish, and there were many dead bees about the hives. The weather being cool and damp was very much against these colonies; they had lived for the first three weeks on the punctured fruit and on the honey of the fruit which had been dipped, as there was at that season few plants in flower from which they could gather nectar. These bees had, therefore, died of starvation, notwithstanding their proximity to the ripe, juicy fruit. This supply of fruit, which they were urgently in need of, was only separated from them by the thin skin of the fruit, which, however, this evidence seems to prove they could not puncture, as they did not do so. With fruit exposed in the open-air, and on the shelves in a workshop, the experiments amounted to the same—that the fruit dipped in honey was cleaned, and the punctured fruit worked into, but the sound fruit remained untouched.

Thus the character of the bee has been established, and my idea in giving such lengthy notice to these experiments is to deter people from placing bee-traps in their fruit trees, as it is a well known fact that a bee will venture nearly anywhere for honey, and thousands of them get trapped in consequence; whereas, if a mixture of beer and treacle is used the bees are not so venturesome as the wasps, and the latter fruit wreckers find their depredations stopped.

TAKING OFF SUPERS.

When the drought puts an effectual end to the honey flow, and if it continues it is best to take off supers and consider the honey making season over. But should rain fall soon there may be a recurrence of honey-yielding flowers, and an appreciable quantity will be brought in and stored by the bees. To clear the supers the best way is to utilize the bee escape that I have advised for so many seasons. But this means trouble to many people, and a rough and ready method will be found as follows: Use the smoker and frighten the bees at the entrance; don't over-smoke the hives as this renders the bees irritable. Most people have a front room that they do not always use. Lower the top sash a few inches, keeping the bottom one of the window closed. Then at late evening take off the supers and put them in this room, and close the door. As soon as the bees begin to work in the morning they will make for the light, and swarm to the window, and constantly moving upwards soon effect their escape. But the window must not be kept open until breakfast time, else the bees from the hives will find the honey, and there will soon be an influx of visitors instead of a departure of guests. When the window is closed a few struggling bees will be sure to come from the supers. But the window can be opened as described for a few moments, and a quill feather deftly handled will accelerate the speed of the slow-movers, who once outside will speedily find their way home.

Don't leave any broken combs or dropped honey about the apiary, as nothing is so conducive to robbing as this.

If there is any unsealed honey and it has to go through the extractor, be sure and see that it is properly ripened afterwards else it is liable to ferment, and thus become spoiled.

Calgary, Alta., Canada.

SELECTING AND BREEDING QUEENS.

The Experience of a New York Honey Producer.

F. H. LOUCKS.

MY GRANDFATHER, on my mother's side, was a bee-keeper long before I was born, else it is improbable that I should be here today.

The foundation of my present business dates back to that grandfather. some 75 or more years ago. Of course the stock was native bees in those days and so it came to pass that I almost inherited a prejudice against the yellow stock. Nevertheless as I grew older I began to wonder if there was not something better and at last I began a series of tests of different strains of bees. I bought bees from seven different breeders, buying at least three and as many as twelve of some. This took about four years, and among these queens there was one just perfect. Never was a boy with a new sled more pleased than I over this queen. About this time I made a visit to friend Howe's. He was all wrapped up in this one particular strain, from which my perfect queen was obtained. So was I, but I did not let him know it. We argued, and I found why these bees were what they are.

That visit did me a lot of good. I went home determined to make an extensive test of my perfect queen next season; which I did, rearing 100 queens from her. As that season advanced I realized more and more that at last I had the bees for me. This opinion strengthened until I ordered 50 queens of the same breeder to complete Italianizing my home yard so I could rear thoroughbreds at home.

These bees are gentle and quiet to handle, not given to stinging, when properly handled and did not run when taking out the combs. Indeed, I have opened hives many times without smoke at all.

Then they put more vim into their work—gathering honey when the blacks do nothing. They are excellent comb buillders, doing the work very regular and even also working in the whole super at once, so that it is finished at about the same time.

At the Wilcox yard I introduced fifteen of those queens and next season there were 60 colonies there. This yard made 3,000 pounds of honey in sections. Those fifteen colonies made 1,500 pounds of it and the 45 colonies of blacks the other 1,500 pounds. If the queens had all been equal to those 15 I would have had 6,000 pounds or double what I got.

Then again these bees will stop rearing brood at the proper time in the fall, and many times store enough fall honey to winter on thus reducing the feed bill to a small item. I speak of this point as many of the strains of Italians I tested would use up all the honey they could get hold of rearing brood very late so I had to furnish feed to winter them. These bees having been developed in this cold climate seem to prepare for winter, making them superb winterers.

I do not wish to condemn all other strains of bees as I can conceive, that in a different locality under other conditions, another strain might be best, especially if said strain was developed in a similar locality.

I believe that bees and animals bred in one locality in their purity for a time become adapted more and more to that locality. I would insist upon thoroughbreds, as a well bred thoroughbred is the only class which in all probability, will reproduce itself every time without deteriorating.

Some argue for first crosses which usually work good as far as honey gathering is concerned, but did you ever notice what a difference in handling, how irritable and stingy they were?

It is not fair to give but one side; so what are its bad points? I have found two: Occasionally a colony will cap their honey dark. Move them to your extracting yard or pinch the queen's head off. The other one could be called bad or not, as you choose. That is reluctance to leave the super. No use of trying, you must use the escape-board and I am about convinced that is the best way.

In closing I would say get some thoroughbreds, breed in a locality like your own, select the best queen for a breeder, and rear your own queens.

It is the most fascinating, most profitable, most necessary work there is to be done in the apiary.

Again I wish to say these remarks are from personal experience covering a period of over twenty years, of delightful work in the apiary.

Lowville, N. Y.

A LETTER FROM DR. CLAUSSEN.

Waupaca, Wis., May 15th, 1907.

Editor Hill.

Enclosed find two photos at my apiary, consisting of 70 colonies. One was taken last summer and shows your humble servant, his wife and a little helper, the best little chap in an apiary I ever saw. He is twelve years old and handles bees as fearlessly as any one.

The other is taken on April 26th, 1907. March came nice and warm; but I did not put my bees out till first week in April. The weather had been warm and fine and I supposed it was going to continue; but the day after the bees were put out it turned raw and cold and the bees have had but two or three good flights.

On April 26th when I got up I found about four inches of snow on the ground and, camera in hand, I went to the apiary. Our strawberries and raspberries were coaxed to put forth their buds in March and are now dead and gone. The bees have plenty of stores and I hope they will stand it.

Yours truly,
W. R. Claussen.

DR. CLAUSSEN'S APIARY, APRIL 26, 1907.

BEE-KEEPING IN AFRICA—THE OTHER SIDE OF THE QUESTION.

Pretoria, Transvaal, South Africa, May 11th, 1907.

The Editor American Bee-Keeper: In April issue of the American Bee-Keeper under the heading Bee Culture in Africa, we notice a letter from Mr. F. W. Drummond a bee-keeper in Natal.

In this letter he states that the bee-keeping industry is not worth bothering about, that he has expended twenty pounds on bees and hives, which amount he has given up as a bad debt.

The reason is because he had twenty-one sections of honey well filled, and after placing them in American cartoons with his name printed on each, he could not get more than two cents per section.

Now two cents means in British

currency a penny each per section, which is simply absurd and ridiculous.

The writer having spent several years in various parts of Natal knows the market value is twenty four cents or 1 shilling per section.

In Pretoria, nearly 500 miles inland from the Natal sea coast, honey in sections 4 1-4x4 1-4x1 7-8 is sold for thirty six cents per section.

In proof of this we enclose a market receipt from which you will see that we bought at 1 shilling 6 pence and for the same we get 2 shillings and for well-filled sections 2 shillings 6 pence. A cash slip we also enclose showing two sections sold for 5 shillings.

Yesterday a bee-keeper (Mr. Wilson, who owns over 50 colonies) called on us for the purpose of selling his honey and we made him an offer of 1 shilling 6 pence each for all well filled sections, but this offer was refused, his price being 2 shillings 6 pence.

If Mr. Drummond will communicate with us we are prepared to take all the honey he can produce and will pay him 1 shilling 6 pence each for all well-filled sections weighing not less than 14 ounces delivered in sound condition at our stores in Pretoria.

Our Mr. D. Cairncross, who is very much interested in bee culture, has successfully imported Italian golden queens, and from his six colonies of bees gets in a season on an average 70 sections per hive, which is disposed of by us at never less than 2 shillings 6 pence each.

Yours faithfully,
Cairncross & Zillen.

PLAGUE OF WILD BEES.

For Four Years They Have Terrorized an English Hospital Keeper and His Wife.

A remarkable story of the "wrath of the bee' comes from Sedgebrook farm, near Plumpton, Sussex. The farm is the East Sussex smallpox hospital, the caretaker of which and, in a lesser degree, his wife have been terrorized by bees for nearly five years.

DR. CLAUSSEN'S APIARY IN SUMMER.

The bees are not hive bees, though it is possible that their progenitors at some remote date were domesticated. They are a swarm of countless thousands (some local gossips say millions) which for years at least have had their abode under the tiles of the farmhouse and have lived the wildest of wild lives.

When the present caretaker came into residence, four Decembers ago, he little dreamed of the unpleasant tenants already in possession. But in the following spring he had a painful revelation. He attempted a little innocent gardening and was badly stung for his pains.

During the last four seasons he has been stung all over his body and chased about the farm times without number. Once last year he was laid low with a sting in the nostril which almost deprived him of his eyesight.

"Look at my garden," he said, waving his hand over a beautifully situated plot of ground which under ordinary conditions would be made highly profitable.

"It never looks respectable and orderly. It never gives me what it ought to give. The truth is I am afraid to touch it except when the bees are indoors. All my gardening has to be done either before the bees come out or after they have gone in.

"They never waste time buzzing around me when they come out. Without warning they dash straight at my head, and they will often follow me a long way down the lane. I seem to be a marked man."

One alarming statement by an ancient rustic of the neighborhood who poses as an expert is that "they are a perticKler wicious kind o' bee, and it takes three of 'em to kill a horse."

On one occasion the caretaker did think he had rid himself of the insects. They swarmed one morning, and thousands on thousands of them made for the grating of an air brick which led into a hollow ventilation pillar inside a second floor room.

As the caretaker saw the black, clustering mass slowly melt through the grating he bethought of a cunning device. He watched them all safely inside the ventilator, and then closed it securely and plied his hospital fumigator.

Not a single bee came out alive; but their dead bodies rolled out of the grating in scores of thousands, and thickly strewed the ground below.

There was much jubilant handshaking between himself and his wife that evening, for his wife had just before had several big stinging insects settle in her hair as she was hanging out washing.

But their joy was short lived, for next morning out from the same old hole under the tiles come, seemingly, as many bees as ever, and set the man running, hoe in hand, from his potato patch as fast as his legs could carry him.

It is thought by local people that the bees were originally abandoned by a former tenant of the farm, and consequently sought refuge in the roomy gables of the house, where by now they have probably stored hundreds of pounds of honey.—London Express.

THE SITUATION IN COLORADO.

S. FRANCIS.

BEES ARE PICKING up rapidly the last two weeks, and most of my colonies will be ready for the alfalfa flow which will be in bloom next week.

Swarms in ten-frame hives have had to be fed in this locality this season. Is this a general condition throughout the county? And if so why?.

I have eight-frame hives almost exclusively but have not fed a single pound of sugar syrup so far but have stimulated them by uncapping what honey they had in their hives. At this writing several colonies have failed to use all their honey, and are crowding the brood nest with new honey from desert bloom to such an extent that I have put on extracting bodies to make them carry the honey above. This plan will relieve the brood nest and insure a large working force for the August honey flow.

Last fall a swarm of bees superceded their queen. This last March I found the young queen and clipped her. I found the old queen on another comb also. Ever since both queens are laying together and the hive is full of bees and brood. Is it not unusual for mother and daughter to remain in the same hive for so long a time?

We read considerable of late about keeping more than one laying queen in the hive at the same time, but I have not seen any explanation as to how it is done. If it can be done successfully without extra labor by using division boards or something of the kind, let us hear about it quick.

If it should happen to turn cool and

cloudy after you have traveled several miles to an out apiary and the weather is unfit to look over the bees, don't complain about it, but use that sharp hoe which you ought to always take with you, and cut down all weeds around the hives and elsewhere and see how much more convenient it will be to work in the apiary. A colony of bees having the entrance to its hive choked with weeds and grass can not produce as much honey as one that is free of weeds.

All supers should be on the strongest colonies now, and all hives ready for the season's increase.

Just now the desert is covered with snowball and bergamot blooms, and brood nests are crowded with primrose pollen, of which there is a great abundance this season. Primrose yields some honey also Now that the season is upon us let us all try to prepare something for exhibit at the "Association" meeting next fall. I am sure it will repay anyone to make an exhibit of something large or small.

I hope subscriptions will continue to come in until our "Association" will have as large or larger membership than formerly.

Please send all articles for publication in The American Bee-Keeper to me, and I will forward them to the editor. Write short, pithy articles if you have anything to offer.

I hope to secure red, white and blue silk ribbons for the awarding of prizes on aparian exhibits at The Colorado State Fair, at Pueblo, instead of cardboard tags of the respective colors. I intend to have the ribbons for the State Association exhibits also.

Erie, Colorado, June 15, 1907.

DOCTORS DISAGREE.

Two bee-"doctors" in The American Bee-Keeper hold diametrically opposed ideas on the subject. Mr. F. Greiner says:—"We cannot as yet bring our bees through the winter with that degree of certainty and uniformity that is possible with sheep, horses, cattle, and domestic fowls"; while Mr. Allen Latham holds that "the bee-keeper who has not solved the wintering problem to the extent that he can winter his bees as well as he can his cows has much yet to learn." If the latter opinion is the true one, I must number myself with those—I fear, the great majority—who have much yet to learn, as I invariably fail to pull through the full complement of stocks which I have winter-packed. —Correspondent British Bee Journal.

TALKING BEE HIVES TO BEGINNERS.

Someone sends The Bee-Keeper a marked copy of the Colton (Calif). Daily News for May 24, 1907, and this is what we read:

SIMPLEX-BEEHIVE.

A Testimonial.

Office of M. O. Hert, Attorney At Law and Notary Public.

Colton, Cal., May 23rd, 1907.

Mr. Carl Ludloff, Colton, Cal.

In reply to your inquiry concerning my experience with the workings of the Simplex Bee Hive will say that I bought two of your hives about April 1st and on the third day of April I put a small swarm in one of them and on the 4th day of May I took 60 pounds of as fine honey as I ever saw from them and today I see that they have at least twenty pounds more. I placed a swarm in the other one about the 20th of April and they have eight frames full of honey and brood; both have done at least four times as much as those I have in box hives and the ordinary frame hives. I wish to say I am not in the bee business for profit, but merely making a study of them from a scientific standpoint, but from what I have seen I believe that any one with or without experience could with your improved hive make bee raising highly profitable, and I predict that when people once investigate your hive you can not make them fast enough to fill your orders. I believe that it is possible to get 100 per cent. more honey from your hive than anything else on the market.

I believe that you will have great success in the manufacture and sale of this hive.

Yours truly,
M. O. Hert.

Colton is a great town. Everything in Southern California is "great." The writer has loaded a number of cars with honey at Colton himself; but that was many years ago, and in those days the bees had to fly to the foothills and mountains and gather the honey from the blossoms of the black sage; it was not gathered from the hives, as it appears Mr. Hert's bees now do.

In reading the foregoing extract, the inexperienced might well decide that the matter of a honey crop in California was not one dependent upon moisture or weather conditions, but purely one of hives, and that the "Simplex" was the solution of the whole question. To those who know anything of the business, however, the effusion will do no "Hert."

If a bee-keeper has devised some practical hive, which he thinks an improvement on those now in use, it would, obviously, be better to set forth its merits in a business-like, professional way, and not resort to such rot as the foregoing "testimonial." It is quite in line with the Lizzie E. Cotton fake of bygone days.

Bees do not make honey from hives, and Mr. Hert's bees would have stored just as much honey in almost any other receptacle—whether box-hive, other frame-hive, soap box, nail keg or hollow log, without doubt, if foundation were given to assist in the construction of comb, as it doubtless was in the Hert case. It was quite needless for Mr. Hert to assure his readers that he was not a professional apiarist—they could readily recognize the fact.

The greater achievements of Mr. Hert's bees in the Simplex hive, as compared to those in other hives, could be accounted for in innumerable ways, aside from the mere matter of hive, which probably has little or nothing to do with the matter.

Let no inexperienced bee-keeper be led to believe that his success or failure in bee-keeping depends upon the mater of the style of hive he uses. Honey is made from the nectar of flowers. Certain kinds of flowers secrete nectar abundantly under favorable conditions. Some of the noteworthy nectar-yielders are, white clover, basswood, buckwheat, alfalfa, mountain sage and white sage, mesquite, heartsease, tupelo, fruit trees, mangrove, saw palmetto, ti-ti and several others. But bear in mind that bees never, never obtain nectar from the walls of a bee hive. (H.)

PERTINENT PARAGRAPHS.

GRANT STANLEY.

Work for improvement.

Grade the honey well.

What has the harvest been?

Bee-keepers are a hopeful set.

How far can bees scent honey?

Are you working up a home market?

Take good care of the bait combs.

Have you made any plans for next year?

Do you put any thought in your business?

Put some of your sound theories to practice.

Have all hives bee-proof except the entrance.

Better to have quality without neatness than neatness without quality.

Order your supplies when you can secure the largest discount.

The baits for use next year should not contain any honey.

If bee-keeping is to be a specialty, it should be our sole business.

More compound words found in the bee-keepers' catalogue than any other business.

G. M. Doolittle says an east wind is not good for the secretion of nectar, and I believe he is right.

Mr. McEvoy says ninety per cent of all the queens on the continent of America want killing. That's putting it pretty strong, but I guess it's not far from the mark.

If you have a case of robbing, make up your mind it is either the result of carelessness or ignorance, and just about one case will waken you up pretty well on this question.

Dr. Miller says, in his book, that more superseding takes place in his locality at the close of a prosperous season than one in which little storing is done.

Swarming is a subject that has baffled some great bee-keepers. It is said to be caused in general by a crowded brood chamber. But how is it when bees swarm with plenty of room above and below? It is nature's way of increasing and we can't get over it.

THE BEE-KEEPING WORLD

Staff Contributors: F. Greiner, Adrian Getaz

Contributions to this department are solicited from all quarters of the earth

BELGIUM.

Stopping Swarms.

Mr. Lacoppe Arnold says that last June, he had a peculiar case of swarming. On coming back home, he found a primary swarm hanging to a light, flexible branch of a small sized tree. The swarm was exposed to the sun. At the time he discovered it, the bees were beginning to leave. He tried to stop them with water but failed. The swarm started off and was crossing the Luxemburg railroad when an express train happened to pass. The noise, the smoke and steam disconcerted the swarm completely. The bees divided, one group came back home and the other settled on some bushes near by.

This gave him an idea. He took a sky rocket, put it at the end of a pole and exploded it in the middle of the next swarm when it was in the air. The effect was the same. Half of the bees returned to the parent hive, and the others settled immediately in a hedge near by.

Another swarm treated the same way settled immediately in some bushes near by.—Le Rucher Belge.

Feeding Swarms.

Mr. E. Ruffy advises to feed the swarms. He says that it helps them so much, that a fed swarm may give a good surplus when if not fed, it might not have made more than its winter provisions. He also advises to hive the swarm on a few frames with starters only. And when these frames are built and the swarm is beginning to build drone combs, complete the brood-nest with full sheets of foundation.—Bulletin de la Suisse Romande.

A. Crousse says that sometimes all the young queens go off with the last afterswarm and leave the parent hive hopelessly queenless.—Le Rucher Belge.

Analyzing Honey.

Dr. Haenle, professor of chemistry at the Strassburg Institute has discovered a process of analyzing honey which enables him to discover any adulteration. Mixtures prepared on purpose were submitted to him, and in every case he was able to detect the adulteration, not only the kind, but also the percentage added.—Le Rucher Belge.

An Old Method of Detecting Adulterated Wax.

Sometimes the substances added to the wax change either the point of fusion or the density. In the absence of special instruments, the change can be detected by the two following processes.

1st: As to the density. Make two small pieces of the same size and form, one of the wax to try and the other of pure wax. Put the pure wax in a glass of water. Add enough alcohol to make the wax barely float. Put in the other. If it goes to the bottom it is heavier, if it floats partly out of the liquid it is lighter. In either case it is adulterated. As to the point of fusion: Make two pieces as described above. Put them in a small thin glass with water. Put that glass in another containing warm water. Add boiling water slowly so as to raise the temperature gradually and uniformly in both. If both pieces of wax are pure they will melt at the same time. A mixture of wax and resin melts sooner (at a lower temperature) than pure wax. On the other hand, an addition of paraffine will raise the melting point.—Le Rucher Belge.

Paul Schonfeld.

Professor Paul Schonfeld died April 7th, 1906, at the age of 84 years. He was one of the leading bee writers of Germany. During his life he has studied chiefly the anatomy and physiology of the bees. His works on the senses of bees, their digestive apparatus, the nutrition, the preparation of the food for the queen and the brood, the heat, the foul brood, etc., will never be out of date.—Le Rucher Belge.

FRANCE.

A Self-built Hive.

In the "Jardin des Plantes" that is the Botanical Garden of Paris, are two colonies of bees in hollow trees, one in a catalpa, the other in a sophora japonica. This last gave a swarm which instead of seeking a lodgment elsewhere concluded to start housekeeping under a large branch of another sophora near by. The swarm when settled made a cluster about one foot in diameter and somewhat longer. During the summer six combs were built, four of them did not materially differ from those constructed in hives. The one on the north side was formed of small cells with thick walls. It was connected with the next one with strong braces of wax.

Another similar comb formed of two pieces joined at an angle protected the opposite side. The ends of all the combs were considerably thickened and were connected together on a portion of their length. The whole was somewhat like a hornet's nest with a very wide entrance at the bottom.

The swarm died during the winter for lack of provisions. It is presumed that nearly all the honey they gathered was spent in building that edifice.—L'Apiculteur.

Top Entrances.

During the last two seasons, Mr. Devguchelle has tried putting the entrance above the brood-nest. There was no increase in surplus for the reason that in both years there was no surplus to be had. These two years are the worst he ever had during his bee-keeping life. When a child, he assisted once in the taking up of a bee tree. The hole in the tree was quite large and an enormous quantity of honey was secured. The opening or entrance was at the top and to dislodge the bees a hole was made at the bottom and enough smoking through it, drove the bees out at the top. The remembrance of that tree with the flight hole above the honey largely contributed to induce him to try putting the entrance above the brood nest. He tried it on twenty-two colonies, the entrance was placed immediately below the top bars of the frames, so as not to interfere with the rabbets supporting them. The bees began the brood near and immediately below the entrance. The colonies with the entrance above seemed to have raised a little more brood than the others. The bottom of the hives were perfectly clean. In the fall the colonies with the entrance above put their provisions on the back of the combs, preferably on the upper part, the cluster remaining near the entrance.

A very unexpected thing appeared. There was considerably less mortality during the winter in the hives with the entrance above, or at least a much less number of dead bees found on the alighting board. An examination of a few showed that the bottoms were clean and that the dead had not been left inside as might be suspected.—L'Apiculteur.

Bees and Their Queen.

Some time ago, an eminent writer, Dr. Buttel Reepen, of Germany, had a curiosity to find out to what extent the bees worship or love their queen. Among his experiments, he put in a box the queen and about one hundred bees with a little food. Two days later, the bees began to show signs of weakness. After two more days only four workers were alive, the queen was yet as sound as ever. A little later only one worker was left, and while she was barely able to stand she presented the queen with the last drop of honey she had in her honey sac. One hour later she was dead but the queen did not seem to suffer yet.—L'Apiculteur.

"Reduce the entrance of all weak colonies or the first thing you know there will be a wholesale fight, and these colonies wiped out and nothing remain but the hive and to wonder how it happened."

THE

American Bee-Keeper

PUBLISHED MONTHLY

Official organ of the New York State Association of Bee-Keepers' Societies.

Official organ of the Colorado State Bee-Keepers' Association.

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Members of the New York State Association of Bee-Keepers' Societies are especially requested to promptly send in all items of interest to bee-keepers of their state, for publication. With nearly one thousand subscribers in New York alone The American Bee-Keeper affords an excellent medium for the exchange of thought pertaining to apiarian affairs in the Empire State. (H.)

Under date of June 12, Mr. C. W. Dayton, Chatsworth, California, writes: "We are having quite a run of honey from sage, wild alfalfa, sumac, etc., which may amount to 50 to 75 pounds per colony. Owing to the unprecendented long continued damp cloudy weather work with the bees is prevented; but if it is warm part of the time, the bees are able to get honey."

TO COLORADO BEE-KEEPERS.

In compliance with the request of Secretary Francis, copies of this issue of The Bee-Keeper are mailed to a number of progressive bee-keepers of Colorado. Mr. Francis has compiled a list of those up to date apiarists of Colorado who will probably want to lend a hand in the work of rebuilding the State Association and placing its apiarian affairs on a profitable basis. The receipt of this issue of The American Bee-Keeper will be a personal invitation to all such to get in touch with the Association and its projected work, and all are advised to write Mr. Francis, Erie, Colo., and become members, thereby regularly receiving The American Bee-Keeper hereafter. This will be the last free copy mailed, and it is sincerly hoped that each and every one will act promptly in the matter. (H.)

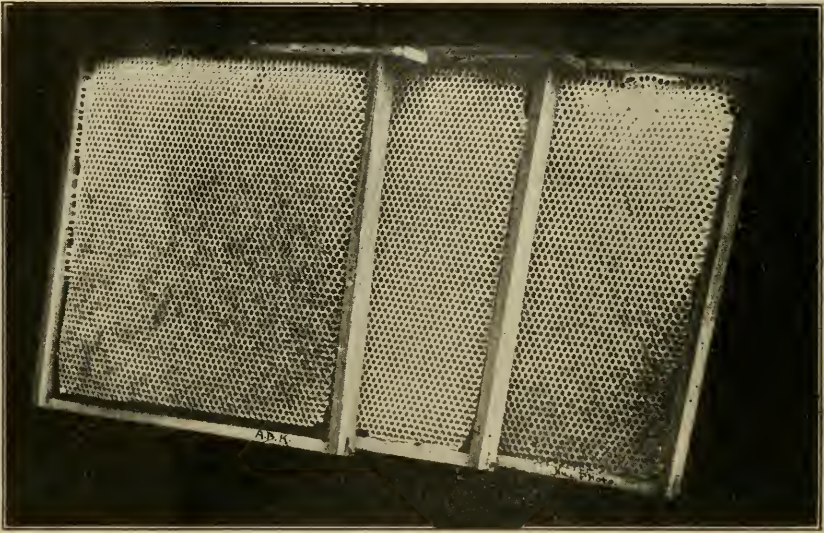
EXCLUDING MICE FROM THE ENTRANCES.

Some of our contemporaries have had considerable to say upon the subject of excluding mice from the hives, and methods by which it could be accomplished.

The simplest and most effective method to be brought to the attention of The Bee-Keeper is that practiced for many years by Mr. O. O. Poppleton.

Take a strip of queen-excluding

metal quite as long as the entrance and somewhat wider. In cutting these entrance strips cut along a line, say, about midway between the perforations, then cut out the narrow bars of metal which enclose the first row of perforations. This gives a series of openings sufficiently large to admit of a perfectly free passage for the bees when the edge thus fashioned is in contact with the bottom-board, yet it will effectually shut out the smallest of little mice. (H.)



DRAWN COMBS, AFTER VOEGLER'S PATENT TREATMENT.

(Note the uniformly perfect cells.)

APIARIAN CONDITIONS IN AFRICA.

In remarkable contrast indeed are the picture drawn by Mr. Drummond, in April Bee-Keeper, and that in this issue, by Messrs. Cairncross & Zillen.

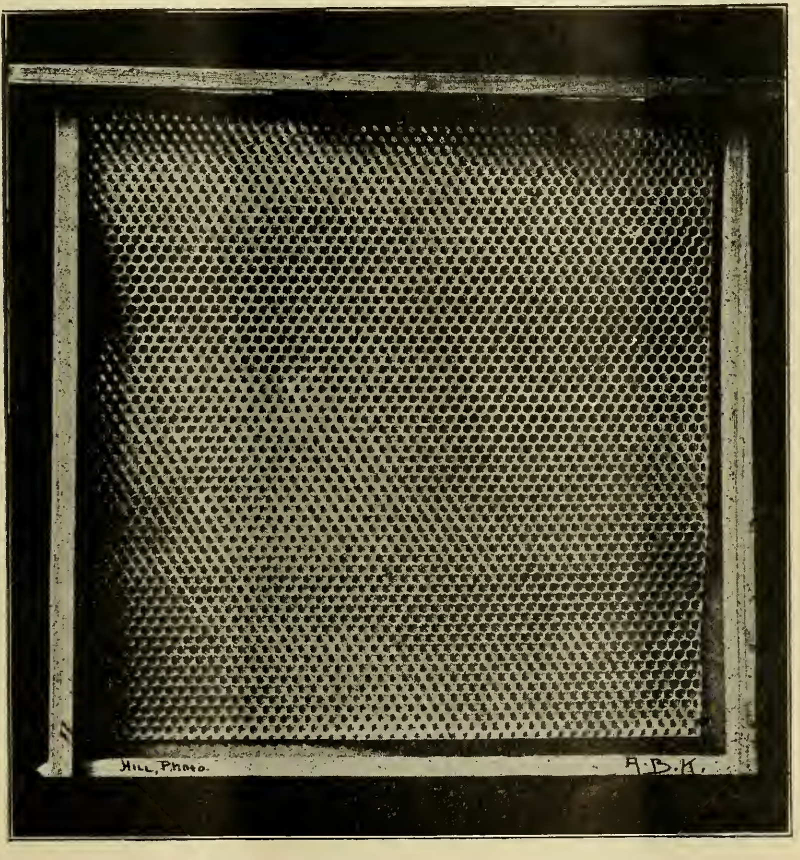
The latter correspondent has enclosed a quantity of correspondence with customers, and account sales, to confirm its premises in the matter; and it is all interesting as well as surprising. Indeed, the thought of securing from 30 to 62 cents per section for honey these days, is invigorating. However, it appears that sales in the Transvaal and the sale of American crops are quite different matters. There the sales seem to be for "dozen lots," and such small quantities; while with us it is frequently a matter of tons and carloads.

Messrs. Cairncross & Zillen are dealers in apiarian products and supplies—their business is selling. Perhaps some of Mr. Drummond's discouragements come from a lack of ability as a salesman. Producing, in any line, is one branch, and the placing of the product upon the market is distinctly another branch which requires special tact and fitness for the work. (H.)

THE PREVENTION OF "SAGGING."

Of the many little difficulties which beset the bee-keeper it is doubtful if any are more perplexing than the sagging of foundation in the brood frames. The methods for its prevention are numerous and varied. Some, such as wiring and the use of splints imbedded in the foundation, tend greatly to reduce the trouble, but these processes all have their objections, and are rarely thoroughly efficient in the accomplishment of their purpose.

Some time ago The Bee-Keeper advised its readers that it had learned of a process that absolutely prevented sagging, even in deep frames with light foundation, and then expressed a hope that it might be able to get hold of the matter and give it to the apiarists of the country. After considerable correspondence, however, with the inventor and patentee of the process, hope has been abandoned.



SHEET OF FOUNDATION TREATED BY THE VOEGLER METHOD.

The process is protected by patent, and is as follows: After the sheets of foundation have been secured in the frames, by any of the methods usually employed, it is placed upon a board similar to that used in imbedding wires. A small paint brush is dipped into melted beeswax and three or four dextrous strokes applied lightly to the side-walls on each side of the foundation along the top and downward towards the centre, where the sagging is usually apparent. This imparts to the side-walls a sort of wire edge, which not only gives the additional wax necessary to resist the strain of the cluster, but also affords a part, at least, of the wax to be used in the construction of the cell-walls.

Mr. O. O. Poppleton some years ago secured permission to use the process in a trial test, and the result has proven the thing a perfect success. In fact, Mr. Poppleton is enthusiastic on the subject and, like The Bee-Keeper, thinks it "too bad" that the fraternity should be deprived of so good a thing. Just what is the object of the inventor in patenting the process and making no effort to place it before the bee-keepers is not apparent. But that, probably, is his own business.

We show herewith a sheet of foundation that has been "painted" with hot wax, as indicated above; also three frames of drawn combs taken at random from Mr. Poppleton's hives, which are, like all others so treated, as nearly perfect as brood combs may be, notwithstanding the fact that they are in deep frames and were protected from sagging by no other than this simple means. He has hundreds more and all are equally free from sag.

It is hoped that this hint may afford a tip that may develop a plan of treatment equally efficient, and one that will be free to the craft. Possibly, slightly melting the tops of the sidewalls of the cells with a flat metal instrument, thus giving the wire-edge, might prove beneficial. Then we wonder if there could be any really valid law to prevent a man from spreading hot beeswax upon the surface of anything that was his own property. It might be advisable to determine this question too. (H.)

PREMIUMS FOR COLORADO BEE-KEEPERS.

At the meeting of the Committee on Exhibits held March 2, at Denver, the following premium list has been drawn up by the committee and the following list of premiums will be given away at the next meeting of the Colorado State Bee-Keepers' Association. All paid up members are eligible to take part in this contest.

	1.	2.	3.
No. 1. Best Nucleus Italian Bees & Queen in Observatory hives	$3.00	$2.00	$1.00
No. 2. Best Nucleus Carniolan Bees & Queen in Observatory hives	3.00	2.00	1.00
No. 3. Best Nucleus Caucasian Bees & Queen in Observatory hives	3.00	2.00	1.00
No. 4. Largest & best display of bees of various races	5.00	3.00	2.00
No. 5. Best case of white comb honey	3.00	2.00	1.00
No. 6. Best case of light amber honey	3.00	2.00	1.00
No. 7. Best & largest display of comb honey	5.00	3.00	2.00
No. 8. Best display of comb honey to be product of a single colony for the season of 1907	3.00	2.00	1.00
No. 9. Best 50 lb. of white extracted honey in suitable glass jars for retail trade	3.00	2.00	1.00
No. 10. Best display of 50 lb. of amber (light) extracted honey in suitable glass jars for retail trade	3.00	2.00	1.00
No. 11. Best display of granulated extracted honey in small packages	2.00	1.00	.50
No. 12. Best & largest display of extracted honey	5.00	3.00	2.00
No. 13. Best display of 10 lb. yellow beeswax	2.00	1.00	.50
No. 14. Best display of special designs in beeswax	2.00	1.00	.50

We have also drawn up a few rules for the judging of these exhibits which are as follows:

The best case white comb honey, the best case light amber, and the best photograph, exhibits Nos. 5, 6 and 16, to become the property of the Association, the premium to be paid owner of the honey.

In judging bees the correct markings of each race, quietness on the combs, number of bees in the observatory hive, the appearance and general condition of the comb on which they are displayed and the appearance and the condition of the hive in which they are exhibited should be considered in their proper rotation.

In judging white comb honey the grading rules adopted by the State Association should be accepted as the standard. In light amber honey the same rules should apply excepting color, which matter should be left to the option of the judges.

In judging extracted honey the flavor, color and body of the exhibits should be considered first, then the attractiveness of package and arrangement of the display. In granulated honey, flavor, texture and attractiveness of package and arrangement of exhibit should be considered.

In judging beeswax, color, freedom from impurities, and perfection of form to be considered.

	1.	2.	3.
No. 15. Most instructive display of Apiarian Products, and of the various uses made of Honey & Beeswax	$ 5.00	$3.00	$2.00
No. 16 Best Exhibition of Photographs of Apiaries and things pertaining to Apiculture	2.00	1.00	.50

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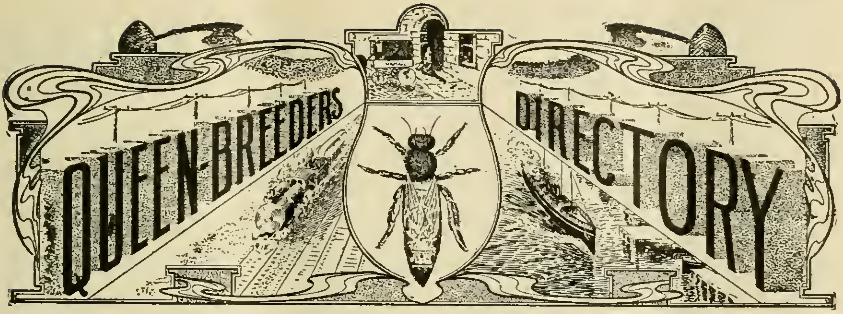

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BETTER THAN AN ISLAND—No other bees within five miles. All fast trains stop here. I consider the Banat Caucasian bees the best and gentlest in the World. One colony made 32 fancy sections of comb honey during September, seventy Italian colonies did not make a pound. Banat Caucasians bred here, other races in out yards. Banat Caucasian queen $3.00. Caucasian queen $1.50. Golden Italian 75 cts. Order now D. Collins, Ph. D., Emporium, Pa.

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BUY YOUR QUEENS from the Red Clover Apiary. Bees guaranteed to work on red clover. Fine 3 and 5-banded untested Italian queens, 60 cts. Tested, 75 cts. If wanted before June 25, add 15 cts to above prices. T. L. Fajen, Alma, Mo. Dec. 7.

BY return mail or money refunded. Italian queens 75 ecnts each, 6 queens $5. Caucasian queens $1. each, 6 queens $5. We quit sending out queens September 1. D. J. Blocher, Pearl City, Ill.

JOHN M. DAVIS, SPRING HILL, TENN.—Has greatly enlarged and improved his queen-rearing facilities. Two unrelated Carniolans and a dark leather Italian lately imported. My own strains of three-band and golden; "Moore's" long-tongue; Doolittle's golden; all selects. Carniolans mated to Italian drones when desired. No disease. Circular free.

WE are now booking orders for Providence Queens for spring delivery. Cull & Williams, Providence, R. I.

MY GOLDEN ITALIAN breeding queen produces bees that do not know enough to stay in the hive when it rains. They are hustlers. Caucasians, bred from an imported Queen. Queens mated in yards 6 miles apart. Satisfaction and safe arrival guaranteed. Both queens and supplies are A No. 1. Agents for The W. T. Falconer Mfg. Co's be supplies. J. R. Rambo, Collingdale, Pa.

IF YOU WANT BEES that winter best, build up early in the spring, the best comb-honey bees, Get my Improved Carniolan Queens, They do business, [Italians for those prefering them.] Catalogue free. W. W. CRIM, Pekin, Ind. Feb8

ITALIAN and Carniolan Queens. One and two-frame nuclei, untested either 3 or 5 banded, 75 cents each. Tested, $1.00 This includes Carniolans. One-frame nucleus 75 cents. Two-frame nucleus, $1.25. Write for particulars.
C. B. BANKSTON & CO., San Antonio, Texas.

ITALIAN AND CAUCASIAN QUEENS and bees; best stock and no disease. My circular is free, and courteous treatment is given all correspondents and patrons. Write me of your needs. A. E. Titoff, Ioamosa, California. Oct. 7

SAM'L M. ANGEL, Route 1, Evansville, Ind.—Italian Queen Breeder. I am the only breeder of Angel's Golden Beauties; also produce ene of the finest strains of bright three-banders. Only tested stock sold. Orders filled in rotation and safe arrival insured. Tested queens, $1; selected tested. $2.50. Apr.8

The American Bee-Keeper Three Full Years for $1.00. To New Subscribers, Three Full Years for Ninety Cents. Is that Cheap enough?

PERTINENT PARAGRAPHS.

GRANT STANLEY.

In cellar wintering, the warmer the cellar the more stores consumed, and it is just as likely that after a while it will turn out that cellar-wintered bees at the proper temperature, will consume as much stores as those on summer stands. Lest you forget.

It will pay the difference to let the bees seal over all honey intended for extracting, as the wax from the cappings will more than pay for the longer period it was allowed to remain on the hives and the honey will be of the highest quality.

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Have your name inserted in our Big Post Card Directory, which goes to thousands of persons who wish to exchange cards. Goes to all parts of the United States, Canada, Mexico, Hawaiian Islands, Philippines, Alaska, Panama, Australia and all parts of Asia and Europe. We will mail over 25,000 copies of the next issue of our directory, so send your name at once if you wish to receive hundreds of cards from all parts of the world. Send your name to-day and enclose 10 cents to pay for a year's subscription to American Stories. Address AMERICAN STORIES, H. D. POST CARD DIRECTORY DEPARTMENT, Grand Rapids, Mich. tf.

HONEY AND BEESWAX MARKETS.

(Dealers' Selling Prices.)

Worcester, Mass., June 13.—The supply of honey is closed out. The demand is slight. W. H. Blodgett & Co.

Chicago, June 13.—The 1906 crop of comb honey is exhausted. There is very little sale for off grades of honey of any kind. Markets today: Choice grades of comb, 16c. Extracted, white, 7c. R. A. Burnett & Co.

Toledo, June 13.—The supply of honey is exhausted. The demand is fair for this season. We could use some choice grades of comb and extracted. We quote our market today as follows: Comb, in retail way, 16 and 17c. Extracted, 5 and 5 1-2 c. Beeswax, 28 and 30c. The Griggs Bros. & Nichols Co .

Milwaukee, April 16, 1907.—The demand is fair. We quote our market today as follow: Comb, Choice to Pansy White 16 to 17 cents; Extracted, 8 to 9 cents; Beeswax, 28 to 30 cents. J. Offermann & Co.

Cincinnati, May 23.—There is no material change in the honey market at this writing. Quote amber in barrels at 5 1-2c to 6½ c. Fancy table honey in crates of two 60 lb. cans, 8c to 9c. For choice yellow beeswax, free from dirt, we are paying 31c cash and 35c in trade, delivered here. The Fred W. Muth Co, 51 Walnut St.

Chicago, June 8.—Not any of the honey yield of 1907 has appeared on this market and with the choice white grades of last years, comb being exhausted there is practically nothing to base values on other than that of history, for there is always a limited demand for it. New white comb of good flavor would sell at 16c, no demand for other grades. Extracted is also exhausted of best grade. Beeswax is selling or arrival at 32c per pound. R. A. Burnett & Co.

Denver, June 15.—Our market is in good shape for the new crop of white comb honey, as old stock is entirely cleaned up. No change in price of extracted and supply ample to meet demand. We pay 24 to 26 cents for beeswax. The Colorado Honey Producers Association.

Kansas City, Mo., June 13.—Very little of any kind in the market, which leaves us in good shape for new crop. The demand is fair for comb and light grades of extracted. We quote our market today: Comb, Fancy, $3.25. No. 1 white, $2.50 and $2.75. Extracted, white, 8c Amber, 7c. Beeswax, 30c. C. C. Clemmons & Co.

HONEY DEALERS.

WE are always in the market for extracted honey, as we sell unlimited quantities. Send us a sample and your best price delivered here. The Fred W. Muth Co., 51 Walnut St., Cincinnati, O. 6-11

Cent-a-Word Column.

DO NOT burn your refuse from Wax Extractor. Send it to me and get your cash. Archie L. Coggshall, Groton, N. Y. tf

AGENTS WANTED—To sell advertising novelties, good commission allowed. Send for catalogue and terms. American Manufacturing Concern, Falconer, N. Y.

FOR SALE—45 colonies of bees, excellent strain, no disease, several hundred hives, foundation mill, dipping tank, Cowan honey extractor and numerous other appliances. Located in Florida. Cheap for cash. Address, S. B. C. Care American Bee-Keeper, Fort Pierce, Fla.

INCREASE is a hadsome little book telling how to form new colonies without breaking working stocks. A simple, sure, satisfactory plan, 25c. Baby Nuclei tells how to mate many queens from sections with a mere handful of bees; 42 pages, 20 pictures, 50c. Cell Getting tells how to save labor in rearing queens, 50 cents. Queen rearing outfits. Golden all-over and Caucasian Queens. Circulars free. E. L. PRATT, Swarthmore, Pa.

WANTED.—No. 1 white and amber and buckwheat extracted honey in 60 lb. cans or barrels. Send sample and quote lowest price delivered in Preston. M. V. Facey, Preston, Fillmore county, Minn.

QUEENS SENT ON APPROVAL—After June first, I will mail a few queens, with escort of their own bees, for inspection. If you are pleased with queen, send money order for $1.00, if not pleased, turn over address and leave in office for return mail. These queens are carefully bred from a very hardy strain of bees. A. M. Applegate, Reynoldsville, Jefferson Co., Pa. Jy. 7

I wonder where the consumer got the impression of the pound section of honey if not given by the bee-keeper himself. Now stop talking about the pound section and in selling, say so much a section, instead of "a pound," and it will be all right.

The American Bee-Keeper Three Full Years $1.00. To New Subscribers, Three Full Years for Ninety Cents. Is that Cheap Enough?

The INDUSTRIOUS HEN

The South's Leading Poultry Journal

Offers **OVER $1,000.00 IN CASH PRIZES.** Everybody can make money. Ask today on a postal card for a sample copy and **Cash Prize List.** Subscription, 50c a year; three years, $1.

The Industrious Hen Co., Box B, **Knoxville, Tenn.**

We recommend THE INDUSTRIOUS HEN as one of the best poultry journals published and will have it sent one year free to all who send us $1.00 for two years' subscription to THE BEE-KEEPER. Address

The American Bee-Keeper, Falconer, N. Y.

KRUXO

The perfect developing paper for professional and amateur photographers.

Easiest to Use, Best in Results. Low in Price.

It's Easy to Make Pictures with KRUXO.

Write today for full information, to
KILBORN PHOTO PAPER CO.,
CEDAR RAPIDS, IOWA.

N. B.—The editor of The Bee-Keeper has used more than a thousand gross of Kruxo paper.

PATENTS

CAVEATS, TRADE MARKS, COPYRIGHTS AND DESIGNS.

Send your business direct to Washington, saves time, costs less, better service.

My office close to U. S. Patent Office. FREE preliminary examinations made. Atty's fee not due until patent is secured. PERSONAL ATTENTION GIVEN—19 YEARS ACTUAL EXPERIENCE. Book "How to obtain Patents," etc., sent free. Patents procured through E. G. Siggers receive special notice, without charge, in the

INVENTIVE AGE

illustrated monthly—Eleventh year—terms, $1. a year.

E. G. SIGGERS, 918 F St., N. W., WASHINGTON, D. C.

DEWEY'S
Foundation Fastener.

Your Automatic Starter Fastener is all you claim for it—the best on the market.—DOOLITTLE & CLARK.

$5.00 Reward.

To the person who will secure the greatest number of starters in sections in fifteen minutes, using one of my new foundation fasteners, I will pay a reward of $5.00.

This reward is offered to establish a record. I have had many flattering reports, both as to the quality of the work done and the rapidity with which the machine can be operated. But I believe a better record can be made.

To anyone who is desirous of knowing the merits of this device a full description will be forwarded with conditions governing the contest. The contest closes the first of October, 1907.

E. H. DEWEY,
GREAT BARRINGTON, MASS.

20 PAPERS FOR $1.00

20 of the Best Known and Most Readable Papers and Magazines in the U. S.

ALL ONE FULL YEAR FOR ONLY $1.00

At a large expense to increase our circulation and to give our subscribers the best of everything, we have made arrangements to offer them

The Greatest Clubbing Offer Ever Presented by Any Paper

We Can Offer You **Twenty Great Papers** and Magainezs for the Price of Only **$1.00**—All Are Well Known and Are From the North, South, East and West.

LOOK AT THIS WONDERFUL LIST:

Twentieth Century Review Magazine.
The Planters Journal, Memphis.
New Era Magazine, New York.
The Rural Weekly, St. Paul, Minn.
Poultry Digest, N. Y.
Kimbal's Dairy Farmer.
American Farmer, Indianapolis, Ind.
Southwest Magazine, St. Louis, Mo.
Successful Farming, Des Moines, Ia.
Modern Stories Magazine, New York.
The Home Magazine, New York.
Good Health Magazine, Battle Creek, Mich.
The Farmers Wife Magazine, St. Paul.
Mail Order Magazine.
The Farm Money Maker. Cincinnati, O.
Home Queen Magazine, New York.
Evening Hours Magazine, New Jersey.
Welcome Guest Magazine.
Maxwell's Talisman, Chicago.
Women's Work Magazine.

SUMMARY:

20 Great Weeklies and Monthlies
Every Paper Goes to You One Full Year.

Send in Seven Orders and get valuable Fountain Pen or Large Hand Sewed American Flag, 3x5 feet.

If you are already a subscriber to any or all of these papers your time will be extended one year on receipt of the combination price.

THIS OFFER GOOD ONLY 30 DAYS.

References: Any business house in this city or any paper in our club

If you don't want all the papers sent to one address, you can split the club and have them sent any number of different addresses.

Each and every paper contains reading matter of interest and value to every member of any family, from the youngest baby to the oldest grandparent.

The saving habit is the key to wealth not how much you make, but how much you save.

On account of this being such a remarkable offer and for only a limited time from this date, we cannot send samples.

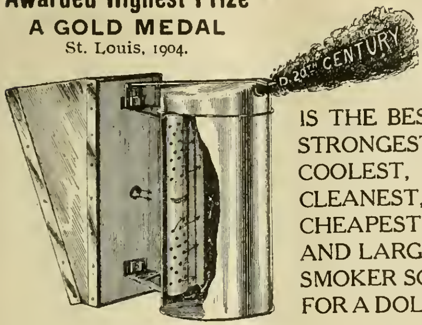
On Personal Checks add 10c for Exchange

If you send in your order we will send you the grandest and biggest premium list ever offered to club raisers on this wonderful offer.

PLANTERS JOURNAL PUB. CO.
Dept. 58 Memphis, Tenn.

The Danzenbaker 20th Century Smoker
Pat. Oct. 3, '05, June 4, '07.

Awarded Highest Prize
A GOLD MEDAL
St. Louis, 1904.



IS THE BEST,
STRONGEST,
COOLEST,
CLEANEST,
CHEAPEST,
AND LARGEST
SMOKER SOLD
FOR A DOLLAR

It has a side grate that strengthens the fire-cup, and holds a removable metal and asbestos lining that keeps it cool, adding to its durability. It has no valves to get out of order or snout to **CLOG WITH SOOT.**

ALL THAT IS CLAIMED.—N. E. France, Platteville, Wis., General Manager of the National Bee-keepers' Association says:

I have given your 20th Century a thorough trial. For convenience in lighting, durability, and long time one filling will last and give ample smoke, I find it all you claim. In the spring I shall want several. I always want the best.

SURPASSES ALL OTHERS.—Mr. Grant Stanley, Nisbet, Pa.—"After giving the Danzenbaker 20th Century Smoker several trials, can say it surpasses all smokers it has been my liberty to try; it will not go out until the fuel is all consumed, and it produces a cool smoke, a feature very necessary in any first-class smoker."

BEST IN TWENTY YEARS.—M .D. Andes. BristolTenn.—"I have used the 20th Century Smoker one season. It has given me entire satisfaction. In my twenty years of bee-keeping I first used the old stand-by Clark smoker, and I believe I have tried all the different makes, as I am always looking for the best, and will say that your smoker beats them all up to date."

NEVER TOO HOT TO HOLD.—Dr. Reginald Munson, Washington, D. C.—"I am well pleased with the 20th Century Smoker. It keeps fire well without getting too hot to hold on continuous use and makes smoke enough to satisfy the most critical."

Price Dan-ze, Large 3½-inch Smokers:

Postpaid—one, $1.15; two, $2.10; three, $3; five, $4.50.
By Express or freight—one, $1; six, $4.20.

"Facts About Bees," a sixty-four-page pamphlet, sent free on request. Send also address of your bee-keeping friends for same.

F. DANZENBAKER, Norfolk, Va.
(**Jamestown Exposition Sta.** Money-orders on Norfolk.)

Our Special Premium Offer

$2.00 Gold Fountain Pen,

and the American Bee-Keeper one year for only 90c to every subscriber, old or new. The pen will be forwarded immediately upon receipt of the money. It is made of the best quality of hard rubber in four parts. and fitted with a guaranteed iridium pointed 14-k **GOLD PEN.** The "fountain" is throughout of the simplest construction and can not get out of order, overflow, or fail to supply ink to the nib.

"A FOUNTAIN PEN IS A NECESSITY OF THE 20TH CENTURY."

It dispenses with the inconvenient inkstand and is always ready for use.

This is an unusual opportunity to secure, at a very low price, an article of superior quality that is coming to be essential to the comfort and convenience of every one. Remember this offer is for a short time only.

The American Bee-Keeper, Falconer, New York

TWO YEARS FOR $1.00

After a man succeeds in publishing a good journal, the next step is that of getting it into the hands of the people, of getting them to reading it, and becoming acquainted with its merits. This can be done by advertising, sending out sample copies, circulars, etc. All this costs money. I think I am safe in saying that, for every new subscriber I have received, I have paid $2.00 in advertising; hence, I have always said that a publisher of a good journal could afford to send his paper one year free for the sake of getting it into new hands. It would cost no more than other forms of advertising, and would be more effective; but, for obvious reasons, this plan could not be put into practice; but I am going to come as near to it as I can. I have between 200 and 300 complete sets of back numbers for the present year; and as long as the supply holds out I will send a complete set, and the rest of this year free, to any one who will send me $1.00 for the Review for 1907.

Back numbers of the Review are different from those of newspapers and some journals. The information that they contain is just as valuable now as when first published. In an advertisement like this it is imposisble to give much description, but I will mention one or two features of each issue of

THE REVIEW FOR 1906

JANUARY.—The keynote of the Review for 1906 is "The Control of Increase;" and Mr. Gill, of Colorado, starts off by telling how he completely and profitably controls the increase of 1000 colonies run for comb honey.

FEBRUARY.—R. C. Aikin shows how, with a knowledge of principles, increase can be controlled; but perhaps the most valuable contribution to this issue is from R. F. Holterman, of Canada, describing "Some Short Cuts in the Production of Extracted Honey.

MARCH.—In this issue is illustrated and described the only really successful non-swarming hive that has yet been invented. Its inventor, Mr. L. A. Aspinwall, secured an average of 140 pounds of comb honey the past season from fifty colonies, and had no swarms.

APRIL.—The most valuable article in this issue is from C. A. Olmstead, of New York, in which he illustrates and describes a method of foretelling swarming without opening the hive.

MAY.—In this issue is begun a series of the most delightfully and beautifully illustrated sketches that have ever appeared in the Review—that of the editor's experience in locating and managing three out-apiaries in the wild, picturesque, raspberry region of Northern Michigan.

JUNE.—The article this month on "Control of Increase," is by that veteran, J. E. Crane, of Vermont, and shows how to do the work when the harvest comes early. This issue also gives the editor's experience in moving his 400 colonies into Northern Michigan—illustrated with four engravings.

JULY.—This issue has a beautiful full-page illustration of the Review apiary here at Flint (105 colonies), and the editor gives a resume of his work in this apiary for the first six months of the year—showing where he failed and why he succeeded.

AUGUST.—In this number the editor tells of "Reaping the Harvest in Northern Michigan," and gives pictures of the different apiaries, some at old abandoned lumber-camps, one with a tent for a honey-house, while the reading-matter has an actual flavor of the wild northern woods.

SEPTEMBER.—Of all the articles in this year's Review I doubt if any one is more really helpful than the one in this issue by the editor, entitled "Conveniences in the production of Extracted Honey." It has several illustrations, and shows how to use bee-escapes without the back-aching work of lifting the hives by hand; how to make a honey-knife cut as "slick as a razor;" how to make an uncapping-can for ten cents; how to arrange a cheap automatic strainer, and run the honey directly into the cans; and how to arrange an electric bell, at a cost of 60 cts., that will ring when the can is full.

Instead of mentioning some of the special features for October, November, and December, let me use the space to say that one of the good things that will appear in the Review for 1907 will be a series of articles from E. D. Townsend, Michigan's foremost bee-keeper. All of his writings in the past have been fragmentary, a glimpse here and there, and they have been scattered here and there in different journals. Now he is going to write in a consecutive manner, starting at the beginning of the season and going through the year—just as though he were writing a book. It will give his system of management.

ADVANCED BEE CULTURE.

This is a book of 230 pages, beautifully printed, bound, and illustrated, that discusses bee-keeping from a money point of view—shows how to make a pleasant and profitable business out of bee-keeping. Price $1.20; or, the REVIEW for 1907 (and all the back numbers of this year free) for only $2.00.

W. Z. HUTCHINSON, Flint, Mich.

DITTMER'S

Comb Foundation

Why do thousands of Bee-Keepers prefer it to other makes?

Because the Bees like it Best and Accept it more readily.

Dittmer's Process is Dittmer's

It Stands on its **Own Name** and its Own Foundation, to which alone it owes its Reputation and Merits.

We are now ready to make Prices for next season.

For **Working Wax** for **Cash** and for full Line of Supplies.

WHOLESALE AND RETAIL.

Free Catalog and Samples.

GUS DITTMER, Augusta, Wis.

A New One

The Modern Farmer and Busy Bee	$ .25
Gleanings in Bee Culture	1.00
Inland Poultry Journal	.50
Kimballs' Dairy Farmer	.50
	$2.25

Our price for all of these one year only, $1.15.

Write for sample copy and other clubbing offers as good or better.

St. Joseph, Mo.

The Miller WAX EXTRACTOR

Has revolutionized wax-handling methods. Get acquainted with the MILLER before buying.

HOMES In Old Virginia

It is gradually brought to light that the Civil war has made great changes, freed the slaves, and in consequence has made the large land owners poor and finally freed the land from the original owners who would not sell until they were compelled to do so. There are some of the finest lands in the market at very low prices, lands that produce all kinds of crops, grasses, fruits, and berries; fine for stock. You find green truck patches, such as cabbage, turnips, lettuce, kale, spinach, etc., growing all the winter. The climate is the best all the year around to be found, not too cold not too warm. Good water. Healthy. Railroads running in every direction. If you desire to know all about Virginia send 10c. for three months subscription of the VIRGINIA FARMER to Farmer Co., Box 604, Emporia, Va.

MAPS

A VEST POCKET MAP OF YOUR STATE

New issue. These maps show all the Counties, in seven colors, all railroads, postoffices—and many towns not given in the postal guide—rivers, lakes and mountains, with index and population of counties, cities and towns. Census—it gives all official returns. We will send you postpaid any state map you wish for 25 Cents (silver.)

John W. Hann

WAUNETA, NEBRASKA

DANZENBAKER PRIZES

It is to be regretted that so many bee-keepers are satisfied to produce year after year a very ordinary grade of honey as regards its appearance, when by a little more care, and having more suitable fixtures, and by taking the honey from the hive at just the right time, a much larger percentage of "fancy" or "extra fancy" honey could be produced, which would sell at a much higher price. The experience of honey-merchants generally is that there is no difficulty in disposing of large stocks of fancy or extra fancy, even when the market is dull. It is the inferior grades that suffer most at these times. We believe, too, that bee-keepers would be very much better satisfied with their season's work if their best efforts were made to produce a really fine product. To increase further the interest in extra fancy honey, the following prizes are offered for honey produced in Danzenbaker hives during the year 1907, under the following conditions:

FIRST.—As above stated the honey must be produced in a Danzenbaker hive, either the present style or any Danzenbaker hive that has been put out within the last few years. These hives may be had of any dealer in bee-keepers' supplies in any part of the country.

SECOND.—For Classes 1 and 2 we require a shipment of approximately the amount stated, to be made by the bee-keeper direct to us at Medina. After the prizes have been awarded the honey entered for competition in Class 1 or 2 will be held subject to the instructions of the producer. We will sell it at a five per cent commission or we will ship it to any point direct by freight or express. There being good honey markets in our immediate vicinity as Columbus, Cincinnati, Cleveland, Buffalo, and Pittsburg, it can be disposed of without difficulty at good market prices, and the shipper will not have to lose a good market by shipping it here. Neither the honey awarded a prize nor that which obtained no prize is to be our property, but will be sold subject to the instructions of the producer who sends it to us. We are interested only in inspecting it to award the prizes.

THIRD.—For all honey submitted for prizes we must have a definite statement from the producer regarding the conditions under which it was produced, whether a light or heavy flow of honey, how the colony was handled, how many colonies in the yard, from what source produced, etc.

FOURTH.—For Classes 3, 4, and 5, we must, in addition to the above report have the signature of two witnesses certifying to the correctness of the report. If the party who sends us the report for the competition is well known to us we shall not require these witnesses. References may be given instead of the signature of witnesses if desired. All parties intending to compete for these prizes should send for blanks which we will furnish, on which the report may be made out.

FIFTH.—It will be noticed in the last three classes, three to five inclusive, that it is not at all necessary to send us the honey—all we require is a report.

SIXTH.—We reserve the right to limit the number of awards in each class, or to make no awards in a class if there are no satisfactory entries for the same.

SEVENTH.—No contestant will be awarded more than one prize in each class, but may make two entries if desired—one in Class 1 or 2, and another in Class 3, 4, or 5.

The classifications for the prizes are as follows:

Class 1.—For best shipment of 200 lbs. of comb honey in Danzenbaker hive.
Class 2.—For best case of comb honey in Danzenbaker sections.
Class 3.—For best report of yield from single colony in Dazenbaker hive.
Class 4.—For best report of yield from five colonies in Danzenbaker hives.
Class 5.—For best report of general results from use of Danzenbaker hive.

For each class there will be ten prizes as follows:

First.—$10.00.
Second.—$7.00.
Third.—$5.00.
Fourth.—$2.00.
Fifth to Tenth.—$1.00 each.

Five Classes.
Ten Prizes for each Class.
Fifty Prizes in all.

This is the time to decide to enter this competition. No matter where you live, whether in the United States or elsewhere, you can certainly find one class in which you can make an entry; and as there are ten prizes in each class we believe that no one will be greatly disappointed in the results unless it is ourselves, and we hope that we shall not be, but see a large number of entries. Even if you fail to get a prize, you will doubtless have increased the value of your own product by your efforts to produce some big results or an extra quality of honey.

The A. I. ROOT CO., Medina, Ohio

The American Bee-Keeper

AUGUST
1907

Fort Pierce, Fla.,—Falconer, N.Y.

BEE HIVES SECTIONS

EVERYTHING

That is used by bee-keepers can be procured of us as cheaply as anywhere, and we know OUR GOODS ARE SUPERIOR, both in material and workmanship, to those of any competitor. ONE TRIAL WILL CONVINCE YOU. That's all we ask. You will never buy of anyone else.

Our new illustrated catalogue and price list is now ready. Send for one on a postal card.

The Fred W. Muth Co., 51 Walnut Street, Cincinnati, Ohio, handle our line of goods.

THE

W. T. Falconer Manfg. Co.

JAMESTOWN, NEW YORK

Get Our Catalog

OF

BEE SUPPLIES

OUR GOODS ARE SUPERIOR IN QUALITY
THE PRICES ARE REASONABLY LOW

Everything we make is practical. We have been making Beekeepers' Supplies for over 25 years, and if EXPERIENCE and responsibility count for anything, WE OUGHT TO HAVE YOUR TRADE.

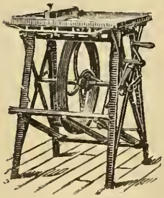
THE W. T. FALCONER MANUFACTURING COMPANY
JAMESTOWN, N. Y.

Following are a few of those who handle our goods in large quantities, and can supply you at factory prices :

FRED W. MUTH CO., 51 Walnut Street, Cincinnati, Ohio.
HUDSON SHAVER, Perch River, N. Y.
FRANK A. LACEY, 5 Madison avenue, Danbury, Conn.
CULL & WILLIAMS, 180 Washington street, Providence, R. I.
C. O. BEARD, Salina, Kansas.

BARNES

Foot Power Machinery.



This cut represents our Combined Machine, which is the best machine made for use in the construction of Hives, Sections, Boxes, etc. Sent on trial. Send for Catalogue and Price List.

W. F. & J. BARNES CO.
913 Ruby St., Rockford, Ill.

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ONE YEAR'S READING ! ! !

Send us the names of 5 magazine readers in your town and 12½c, (½ regular price) for a year's subscription to our interesting story magazine. We will send your name to publishers all over the U. S., and you will receive over 200 sample magazines, etc. Address

The New Orleans Monthly,
2126ab Brainerd Street,
NEW ORLEANS, :: :: LOUISIANA.

Three Months for Only 20 Cents

To a New Subscriber

THE

American Bee Journal

Established in 1861

It is the only Weekly Bee Paper in America. Those who write for it are among the most extensive and successful bee-keepers in the World. Many of them produce honey by the ton, and make money at the business, hence their experience is valuable.

Among the Departments represented in the Bee Journal are these: Editorial Notes and Comments, Miscellaneous News Items, Contributed Special Articles, Opinions of Some Experts, Proceedings of Conventions, Our Bee-Keeping Sisters, Mr. Hasty's After-thoughts, Dr. Miller's Answers to Questions, Honey and beeswax Market Quotations.

Every Bee-Keeper, whether having one colony or 100, should read the old American Bee Journal every week.

Only $1.00 a Year; or 20 cents for a trial trip of three months (13 copies), to a new subscriber. Sample copy free. Ask for it.

George W. York & Co.
118 W. Jackson Blvd., Chicago, Illinois

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A Farm or any Property anywhere, read

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of Niles, Ohio. 10c will bring sample copy. tf

PATENTS

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My office close to U. S. Patent Office. FREE preliminary examinations made. Atty's fee not due until patent is secured. PERSONAL ATTENTION GIVEN—19 YEARS ACTUAL EXPERIENCE. Book "How to obtain Patents," etc., sent free. Patents procured through E. G. Siggers receive special notice, without charge, in the

INVENTIVE AGE

illustrated monthly—Eleventh year—terms, $1. a year.

E. G. SIGGERS, 918 F St., N. W., WASHINGTON, D. C.

REAL ESTATE WANTED

For hundreds of CASH BUYERS, who advertise in THE U. S. REAL ESTATE JOURNAL and THE PROSPERITY MAKER, a unique, original, illustrated monthly for the Home, Real Estate, Business. For wide-awake buyers, sellers, agents, investors. A world wide circulation. Sample copy, 25c or $1.00 per year. Free advice. Write J. ALLEN STEPHENS, Publisher, 18 Willard Building, Muncie, Ind. Est. 1892.

COMBINATION OFFER

The best Home and Fashion Magazine
published for fifty cents a year is The

New Idea Woman's Magazine

It contains over 100 pages each month of Current Fashions, Economy Articles, Household Advice, Dressmaking and Millinery, Short Stories, etc., beautifully illustrated with half-tone and color plates.

By special arrangement with the publishers we make the following exceptional offer:

American Bee-Keeper - - -	regular price	**50c**
The New Idea Woman's Magazine -	regular price	**50c**
Both, one year, for - - - - - -		**65c**

SAMPLES FREE

THE AMERICAN BEE-KEEPER

FALCONER, NEW YORK

National Bee-Keepers' Assoc'n.

The largest bee-keepers' society in the world. Organized to protect and promote the interests of its members.

Membership Fee, $1 a Year.

N. E. France, Platteville, Wis.
General Manager and Treasurer.

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TWO YEARS FOR $1.00

After a man succeeds in publishing a good journal, the next step is that of getting it into the hands of the people, of getting them to reading it, and becoming acquainted with its merits. This can be done by advertising, sending out sample copies, circulars, etc. All this costs money. I think I am safe in saying that, for every new subscriber I have received, I have paid $2.00 in advertising; hence, I have always said that a publisher of a good journal could afford to send his paper one year free for the sake of getting it into new hands. It would cost no more than other forms of advertising, and would be more effective; but, for obvious reasons, this plan could not be put into practice; but I am going to come as near to it as I can. I have between 200 and 300 complete sets of back numbers for the present year; and as long as the supply holds out I will send a complete set, and the rest of this year free, to any one who will send me $1.00 for the Review for 1907.

Back numbers of the Review are different from those of newspapers and some journals. The information that they contain is just as valuable now as when first published. In an advertisement like this it is imposisble to give much description, but I will mention one or two features of each issue of

THE REVIEW FOR 1906

JANUARY.—The keynote of the Review for 1906 is "The Control of Increase;" and Mr. Gill, of Colorado, starts off by telling how he completely and profitably controls the increase of 1000 colonies run for comb honey.

FEBRUARY.—R. C. Aikin shows how, with a knowledge of principles, increase can be controlled; but perhaps the most valuable contribution to this issue is from R. F. Holterman, of Canada, describing "Some Short Cuts in the Production of Extracted Honey.

MARCH.—In this issue is illustrated and described the only really successful non-swarming hive that has yet been invented. Its inventor, Mr. L. A. Aspinwall, secured an average of 140 pounds of comb honey the past season from fifty colonies, and had no swarms.

APRIL.—The most valuable article in this issue is from C. A. Olmstead, of New York, in which he illustrates and describes a method of foretelling swarming without opening the hive.

MAY.—In this issue is begun a series of the most delightfully and beautifully illustrated sketches that have ever appeared in the Review—that of the editor's experience in locating and managing three out-apiaries in the wild, picturesque, raspberry region of Northern Michigan.

JUNE.—The article this month on "Control of Increase," is by that veteran, J. E. Crane, of Vermont, and shows how to do the work when the harvest comes early. This issue also gives the editor's experience in moving his 400 colonies into Northern Michigan—illustrated with four engravings.

JULY.—This issue has a beautiful full-page illustration of the Review apiary here at Flint (105 colonies), and the editor gives a resume of his work in this apiary for the first six months of the year—showing where he failed and why he succeeded.

AUGUST.—In this number the editor tells of "Reaping the Harvest in Northern Michigan," and gives pictures of the different apiaries, some at old abandoned lumber-camps, one with a tent for a honey-house, while the reading-matter has an actual flavor of the wild northern woods.

SEPTEMBER.—Of all the articles in this year's Review I doubt if any one is more really helpful than the one in this issue by the editor, entitled "Conveniences in the production of Extracted Honey." It has several illustrations, and shows how to use bee-escapes without the back-aching work of lifting the hives by hand; how to make a honey-knife cut as "slick as a razor;" how to make an uncapping-can for ten cents; how to arrange a cheap automatic strainer, and run the honey directly into the cans; and how to arrange an electric bell, at a cost of 60 cts., that will ring when the can is full.

Instead of mentioning some of the special features for October, November, and December, let me use the space to say that one of the good things that will appear in the Review for 1907 will be a series of articles from E. D. Townsend, Michigan's foremost bee-keeper. All of his writings in the past have been fragmentary, a glimpse here and there, and they have been scattered here and there in different journals. Now he is going to write in a consecutive manner, starting at the beginning of the season and going through the year—just as though he were writing a book. It will give his system of management.

ADVANCED BEE CULTURE

This is a book of 230 pages, beautifully printed, bound, and illustrated, that discusses bee-keeping from a money point of view—shows how to make a pleasant and profitable business out of bee-keeping. Price $1.20; or, the Review for 1907 (and all the back numcers of this year free) for only $2.00.

W. Z. HUTCHINSON, Flint, Mich.

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We handle the finest bee supplies, made by the W. T. FALCONER MFG. CO., Jamestown, N. Y. Big Discounts on early orders, let us figure with you on your wants.

MUTH SPECIAL DOVE TAIL HIVES, have a honey board, warp-proof cover, and bottom board, think of it, same price as the regular styles. Send for Catalog.

THE FRED. W. MUTH CO.,

51 WALNUT ST., CINCINNATI, OHIO.

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The American Weekly Journal of Outdoor Life.

For more than thirty years "FOREST and STREAM" has sustained the reputation of being the foremost American weekly journal of outdoor life. Its purpose is to stimulate the enthusiasm of the lover of nature.

To the hunter, the naturalist, the canoeist, the fisherman, the camper, the yachtsman, the lover of any form of outdoor recreative life, it not only reflects the purity and charm of nature, but is reminiscent of pleasures past and of those to come.

SPECIAL TO OUR READERS.

We have made arrangements whereby our readers can subscribe to "FOREST and STREAM" on a basis heretofore unavailable. The regular price of "FOREST and STREAM" is $3.00 a year. Those of our readers who are not at present subscribers to "FOREST and STREAM" may procure a year's subscription to this popular national weekly journal of outdoor life in combination with a year's subscription to The Bee-Keeper both for $3.00 Address all orders to American Bee-Keeper, Falconer. N. Y. Sept 7

Bee-keepers' Associations should include a free subscription to The American Bee-Keeper. We'll accept yearly subscriptions at 25 cents. Try the plan.

H. H. Jepson,

182 Friend St., BOSTON

BEES, QUEENS and SUPPLIES

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The American Bee-Keeper wants an agent in every city, town and village of every English-speaking country in the world. To our representatives everywhere we pay cash for available matter for publication, and liberal cash commissions on all subscribers secured.

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Best 8 frame 1 1-2 story Dovetail Hives	$1.25
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W. D. SOPER, JACKSON, MICH.

THE AMERICAN BEE-KEEPER

Entered at the Postoffice, Fort Pierce, Fla., as second-class mail matter.

Vol. XVII. AUGUST, 1907. No. 8.

SIDE-LIGHT ON SPRING STIMULATION

ALLEN LATHAM.

FEW BEE-KEEPERS escape and fewer resist the temptation to practice brood stimulation in spring. Some succeed apparently in their efforts and tell of their success, while many fail and say nothing about their failures. That brood stimulation is a matter to be let alone, let severely alone, by the novice is acknowledged by all who are honest in their advice and to their own conviction.

I am a frequent sinner in practicing what I do not believe in and probably shall fall again and again. There is a fascination in stirring up the bees in early spring by giving warm feed, and frequently the result is for a time most gratifying. When the reverse comes we are inclined to lay the blame on the weather, forgetting that weather is something that the bee-keeper can never ignore.

Allow me to state a few plain facts and after a few brief comments leave them to the consideration of the readers of The American Bee-Keeper.

I have on a hill, a mile and a half away, eight colonies in my big chunk-honey hives, somewhat sheltered by buildings and trees yet open to a good supply of air. The locality is fair to good and the fall finds these colonies with their very ample brood-nests—2,700 to 3,200 square inches of comb surface—crowded with honey and bees. These colonies are let almost entirely alone, and allowed to run themselves, my work with them being only to replace queens occasionally and to cut out chunk-honey. A colony is usually let alone unless there be sign of queen-failure or other mishap.

At home I have numerous colonies with 2,600 square inches of comb surface. The brood-nest in fall is not usually so well filled and the bees are fewer. At home I am constantly looking to the welfare of my bees, contracting entrances when it seems desirable, feeding when food gets short, and practicing spring stimulation. Even the entrances, on the other hand, of those colonies on the hill are left unchanged, summer and winter, and spring even, they are full size, about 15 square inches, never less than 10 when conditions are normal. Those colonies are never molly-coddled, while the home colonies are most carefully nursed.

It has now for several springs been noted that the colonies on the hill surpass the home colonies all through the spring, being by April 15th what the home colonies are May 10th, nearly a month ahead.

All through this abnormally cold spring the home bees had access to a pan of warm water, kept warm by a brooder-stove contrivance. They patronized this pan well, sometimes taking three gallons of water a day, and carrying water on days when they could not possibly have gone to natural sources for water. (I even saw them carrying water one day while snow was falling and the temperature was only 35.) The hill-colonies all through the cold spring were obliged to get their water as best they could.

One of those hill colonies this spring surpassed even my choicest home colonies Four out of the eight showed strength by May first that would delight most of us June first. Two years ago this same strongest colony, merely by chance, for the queens were unrelated, was so strong that it built five square feet of new comb before the first of May. Gathered so much honey from maples and moved so much old honey to make room for their queen that they occupied five of the mammoth storage frames, frames 16 by 11, this in April at this latitude.

These hill-colonies are not abnormal. They are natural. Any colony which enters the winter with forty pounds of stores, 15,000 to 30,000 bees, and a vigorous queen of that season will surpass the next spring any colony which is made to depend upon spring-feeding.

Therefore, if you wish your colonies to push ahead in spring to take advantage of an early flow, see that they have vigorous queens, plenty of bees, and plenty of honey the fall before.

I should state that my colonies are in hives constructed for the welfare of the bees rather than the convenience of the bee-keeper, since in their construction I sacrificed some of the ease of manipulation in order to insure to the bees every advantage. They pay me good interest for my sacrifice, and as I manipulate them but little I can afford to put up with some inconvenience. I make these last statements that it may be clear that good spring protection must supplement the three requisites mentioned above for rousing spring colonies.

Norwich, Conn.

APIARY OF DR. E. N. FRANCIS, UVALDE, TEX.

CALIFORNIA NOTES.

BY C. W. DAYTON.

THE SEASON.

WE ARE STILL having much rain, and every prospect of a good crop. I still have about ten tons of old honey in tanks which I have not sold. I am going to write you an article soon in which I expect to show that honey improves with age, and that it is the most healthful after it is a year old, and that honey which is taken from the hives before it is entirely sealed over is an injury to the system.

GARDENING IN CALIFORNIA.

One of my correspondents speaks about coming to California on account of being able to raise winter vegetables. Please tell him that I sowed onions, radishes, lettuce, peas, etc., on December 12th, and there are none of them large enough to eat yet, and here it is March 20th. It said on the packet that the radishes could be pulled in twenty days from the planting. The onions are about the size of knitting needles. We have had no frost to hold them back. If they do not hurry up I could go to northern Iowa or Michigan and beat them. Don't say it was the gardener's fault.

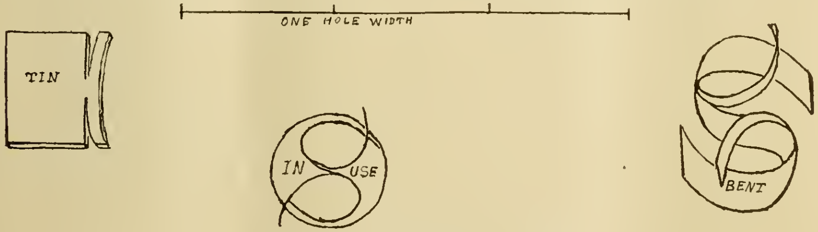
EFFECT OF DAMP WINTER.

I see that a damp winter holds the bees back from brood rearing, as the bees will not begin to swarm yet for twenty or thirty days, when last year the winter was dry during the earlier part that gave the bees an early start and they began to swarm by this time (March 20).

Another thing I notice is that damp weather is almost as preventive to the propagation of the bee moth as the cold in the northern states. Last winter, being dry, they worked in any unoccupied combs; this wet winter they have not molested any combs where there were the most favorable opportunities.

ENTRANCE GUARD.

But wet weather drove the mice into the house and bee hives, and they have eaten bees, pollen and combs, and I guess they were glad to get the ration. You see the entrance to my hives are seven-eighths inch auger holes. When I wish to contract the entrance I put a wad of newspaper in one or more holes. In moving bees I use no nails or screens or hammer to stir up the bees, but insert a cork in each hole when I take the hive up to place it on the wagon. To exclude mice I use a small piece of tin inserted in the entrance thusly:



DAYTON'S ENTRANCE GUARD.

Well, the sketch is done. I was a little puzzled to know how to do that quirly one. If you see any daubs on this paper you may know that it is either honey or breakfast mush, as I began to push the quill before rising from the table.

I am aware that some of the knowing ones will kick at an auger hole for an entrance, but you see there is no patent on mere auger holes. The ventilation comes from the rear of the hive through two holes 2½ inches in diameter, covered with a screen in the summer and a solid stopper for winter. You see the popular style of entrance is too narrow in wet weather, and too wide when it is dry weather. then it requires a wheelbarrow load of entrance closers, and the weather also bothers with them. These tins I use are cut out of any old tomato can and are 1½ and 1¼ inches, and then a narrow strip cut part way off one side. Then bent in the fingers into the proper shape.

We never could give the bees enough ventilation through any ordinary entrance, and I saw that something must be done. Besides, we often want a large amount of ventilation when robbers are around and we must keep them contracted.

Then also the auger hole, or holes are bored in the center of the front end of the hive, and to give the bees a sure foothold the hive is given a heavy coat of paint and then as much fine gravel sprinkled on the paint while it is fresh, as the paint can well hold.

You see I can carry enough of these entrance fixings in one pocket to fix up a whole apiary.

Chatsworth, California.

WIRED FOUNDATION VERSUS WIRED FRAMES.

F. H. CYRENIUS.

IN AS MUCH as your correspondent, Allen Latham, in June number of your journal condemns wired foundation permit me to say a few words in its favor.

I use the Given press, which excels all else for individual use in the foundation line.

I wire my frames both vertically and horizontally; the wires, No. 38, about two inches apart. The sheets of wax are placed one on either side of the wired frames and all pressed together and it is a perfect fixture in the frame.

The pressure crimps the wire in shape of base of the cells.

Now if I were to buy foundation I should use the Van Deuzen vertical wired heavy brood foundation. Then I would wire my frames horizontally, and imbed the wire same as any style.

This cross wiring is far superior to single wires as can be easily understood by giving it a trial.

I use double top-bar; the lower top-bar, bottom-bar and end-bars have saw kerfs from edge to center in place of holes which very much facilitates the wiring.

After the frame is wired the top-bar is nailed on, which also forms the projecting ends.

I think if Mr. Latham will try the cross wiring plan with vertical wires in foundation and horizontal wires in frames he will see a great improvement over his described experience.

Oswego, N. Y.

SHAKEN SWARMS.

F. GREINER.

IT IS SOMETIMES said that Gravenhorst of Germany was the first man that advocated shaken swarms, perhaps twenty-five or thirty years ago.

The same method originated with American apiarists, Doolittle and others, and it can be said that not till late years has this method entered into the regular routine of our apicultural work. Shaking swarms is practically the same thing as driving swarms, which was known several years before Gravenhorst's time.

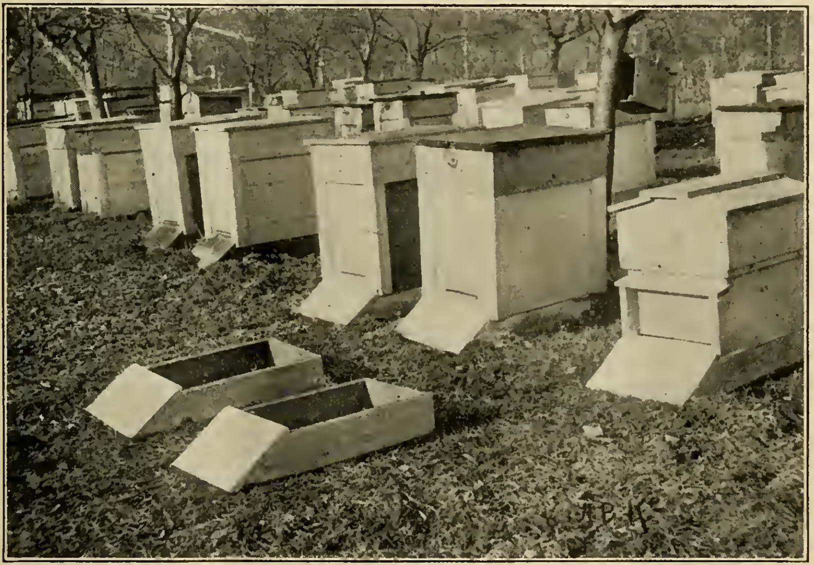
I am not very well posted on all the minor details of apicultural work of former times, and I would not be surprised if Solon on his trip to Egypt had found the Egyptians drive bees nearly 2,500 years ago. When log-gums and straw-skeps were all the fashion, driving bees was the method used for artificial increase. It is a deplorable fact that the originator did not take out a patent, and as much as I regret it, his name has been lost.

Shaking swarms, as applied now, is really a new invention and the methods employed by different bee-masters vary slightly; some place the bees on full combs, others on foundation, and some on frames with only narrow starters. Some bee-keepers brush all bees from the brood combs and place the beeless combs on top of other colonies; some leave bees enough on the combs to take care of the brood, and thus form a new colony giving the motherless family either a queen or a ripe cell; which latter answers just as well. Some contract the hive for occupancy of the brushed bees; others do not. Our old friend Stachelhausen, of Texas (and a good authority he is), gives the full hive at first, but contracts after a few days. He is using the Heddon hive of two shallow brood chambers. He gives two chambers at the time of making the swarm, and later it is an easy matter to contract, for all he has to do is to remove the lower brood chamber. There may have been a little comb built, but no matter, it will help the next swarm that much. Some bee-keepers give the brushed bees a little brood to hold them.

All authorities on shaken swarms agree that the bees ought to be made to fill themselves with honey before they are shaken or brushed from their combs. When the bees were driven no such operation was necessary, for during the process of "drumming" they did not leave home without taking a load with them, and I am of the opinion now that we could with advantage drive the bees with our modern hives as well as when straw-skeps were used. In fact, where hives are as uniform as they should be in a modern apiary, the driving will work easier, as it did with log-gums and straw hives of all sizes and shapes. The only drawback in driving is the uncertainty of getting the queen, which, of course, must go with the driven bees or the driving will be a failure.

In shaking or brushing the bees I always find her ladyship, and when treating a black colony I usually take the precaution to place an entrance guard over the empty hive before commencing the operation. This, however, is only necessary when I want to leave part of the bees on the combs or when the queen is not clipped. When practicing this method in the outyards I cannot very well get along without the queens being clipped. It is a safeguard, and while entrance guard may in cases answer as well, we cannot always have them in place on all hives.

After a swarm is shaken dissatisfaction sometimes arises among the masses, possibly also among the royalty, although I don't think that occurs. I think the queens are subject to the workers and must go if they so decide. When the masses become dissatisfied with the conditions as the bee-master (?) has arranged matters, they just pull out. They seem to think that they can lose nothing, so there they go. If the queen is able to fly and nothing else hinders her following the bees, our hive will be found empty of bees when next we make them a visit. They may swarm out after three or four days. I hardly consider them safe before the seventh day. When the queen is clipped, of course she cannot go with the bees. After sailing around they decide to come back, for really they have no other place to go. The queen crawling about in front of the hive


GREINER'S HIVE-STAND.

enters it also when the bees return.

I have watched many swarms with clipped queens, and I never saw one go astray. Hives, however, must not stand close together, and the alighting-board to each must reach the ground; otherwise there would probably be trouble.

GREINER'S HIVE STANDS.

Right here I would speak a good word for my hive-stand, which I illustrated many years ago in some other periodical, and which I believe some supply dealers manufacture. At any rate, I saw it illustrated in the A B C of Bee Culture. The stand consists of four boards, a box, one side standing and fitting against the bottom board of the hive. It is an easy slant, and the queen or the laden bees can easily crawl up from the ground to the hive. It is close all around; no hiding places for bees or vermin, except such as burrow.

Such a stand could be made of cement for the stationary apiary, but this would not do for outyards.

When the bees swarm out, it does occasionally happen that queens get lost, but those I have watched always found their way back into the hive when the swarm returned, although they swarmed out three or four times before they decided to stay. When I make shaken or brushed swarms I usually wait till queen cells are found with eggs or larvae in them, although I do not think this is essential.

The fact that queen cells are started is a guide. Usually colonies are then strong, and that is what we want. The stronger the better.

It is impossible for me to shake all bees at one time, even if they were all as strong as they could be. I therefore wait till queen cells appear. Those that have them are shaken first, but I would also shake them if no cells were set. I obtain more and better honey (in the comb) by shaking. I brush the combs clean. Not a bee is left on. I am then sure of getting the queen, even if I should miss seeing her, and the swarm is all the stronger for it.

The beeless brood combs are tiered up on such colonies as are not quite strong enough for the sections, and I use an excluder under them. If I want more increase after a week's time these sets of brood combs are just the thing to make nuclei of, or leave undivided. I set them down upon a bottom board anywhere, contract the entrance, give a ripe cell or a queen and dismiss the case from my mind.

If I care not for increase, the bees may be shaken from the brood combs of these now upper stories to strengthen any colony in the yard, and when the brood is all hatched the combs are in part used to fill out the hives again containing the brushed swarms. I do not wish to take a colony into the winter unless it has, and has had for some little time, its full set of combs. From this last remark it will be seen that I practice contraction with the brushed swarms.

In my description I am using "brushed" and "shaken" promiscuously, which may need an explanation to one not versed. When honey is coming in slowly, shaking is all right; but when the honey flow is such as to make the bee-keeper's heart glad, it will fairly rain honey (or nectar) when a comb is shaken to dislodge the bees, and it will be wiser to brush all the bees off. I do not wish to drown the bees in honey; a little sprinkling will do no harm.

The objects sought for in making these brushed swarms are, to control swarming and to obtain fancy comb honey. The bee-keeping friend who wrote me from Iowa about the matter of shaken swarms uses a "Jumbo" 10-frame hive and produces extracted honey.

It would seem to me that there would be no necessity of making any swarms with such a hive and plenty of combs to take care of the honey. I would follow the Dadants, "large hives, no excluders, plenty of comb." I am quite sure I would not make brushed swarms in producing extracted honey. If I did decide to, I don't think I would contract the brood chamber. I never have trouble getting all the honey stored in the extracting combs that it was desirable to have. What I always had to guard against was, having my brood chambers empty when fall came, unless I removed the extracting supers early enough to give the bees a chance to store below.

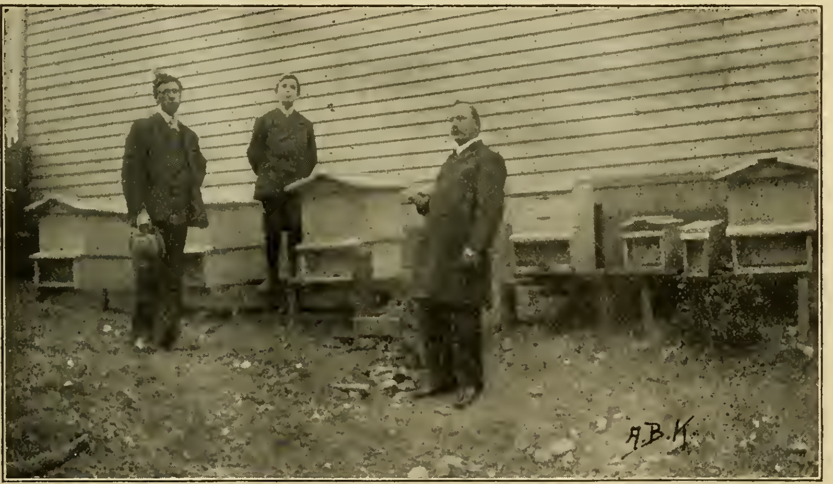
Naples, N. Y.

A CHURCH APIARY.

REV. E. R. WAGNER, Ph.D.

THIRTY YEARS AGO I was a great lover of bees, but having an innate desire to become a student in a western college, it was necessary for me to part with my half-dozen colonies, which I loved like my left hand. My love for bees followed me all through these years, but was never able to gratify it, until two years ago. I was then under most adverse circumstances. Was called as missionary pastor to Cincinnati, Ohio., where we succeeded in building a church and parsonage. the next year I had more honey than I could use. Now when one of my deacons gets a little sour, I present him a jar of honey, and I have no more "sour jars" from that integral part of my congregation.

In the last two years we have repainted our property, recarpeted our church, and reduced our debt $900. It works like a charm, and Mr. Bee-reader, if you ever get to Cincinnati, you are cordially invited to hunt up the little church that has bees in the tower and honey in the pulpit.



"THE BEES TOOK THE LION'S RIBS FOR LANGSTROTH FRAMES."

After toiling with my people fourteen years, it seemed a long time to live with my friends and enemies. So I conceived the idea of putting a colony of bees in the church tower—to keep the pulpit sweet. The floor of the tower is four feet below the base of the arches. My bees come sailing in over the wind, drop down into the calm and quickly enter the hive. They get the early sun, the noon day shade, and always in the dry. The bees did exceedingly well in a poor year, and for the first time in my life, had a bountiful supply of honey for my table.

My interest and colonies grew and

The bees increased so that I could not keep them all in the church tower; so I removed some of them to a vacant lot adjoining the church. The first picture represents the pastor telling the story of Samson to his two boys: "One day this young man was going by a vineyard and a young lion came out from among the vines. He stood in the way. Samson was alone, and did not have a thing in his hands, not even a light stick. The man faced the lion. An inspiring spirit said to Samson, 'You can conquer'. It was a bold challenge and a brave battle. The man won as usual. Three months later, Samson

A CHURCH IN WHICH BEES ARE KEPT.

was going down the same way and turned aside to see the carcass, and behold, a swarm of bees took the ribs of the lion for Langstroth frames, and the climate being something like California's, filled the carcass with honey. Just how Samson got the honey without a modern Bingham bee-smoker, I don't know, but he got the honey, and went on eating, and came to his father and mother, and gave them 'and they did eat'. Out of the eater came forth meat, and out of the strong came forth sweetness."

Honey in a cold climate is sweet, but in a country like California and that of the Greeks or the land of Canaan, it seems to me, it is still sweeter. A conclusion of the matter is: "If parents today would eat more honey, they might have children as strong as Samson."

HISTORICAL NOTES OF BEE-KEEPING IN ANCIENT ROME.

PROF. BURTON N. GATES.

Marcus Terentius Varro. 166 to 27 B. C.

FROM THE ABLEST and the most learned of the Romans, one who has to his credit some 74 books, of which but two remain to us in part today, we are able to gather a few isolated facts relative to the conditions of bee-keeping in Rome before Christ. Like all the early writers, Varro was a collaborator more than an investigator. His writings reflect the thoughts of those centuries before him; but we trust that the reflection is not so antiquated as in some writings of the present day, which profess to be truth and nearly original. It is little credit to a nation's literature to accept as truth unquestioned and untested, someone's statement years outdated. There has been too much of that, in the bee press. We have read in books not a century old, supposed truths fortunately now disproved, which appear in Varro's writing. They have thus penetrated down to modern times, have persisted near two thousand years and goodness knows how long before Varro's time.

Among things of comparatively recent recognition, Varro realized the role of the queen as mother of the colony, but at the same time confused her supposed control and rule over the hive with the male sex, as was customary at the time.

He recommends the planting of nectar-yielding plants, the re-queening of dwindling stocks, care in the spring that the strong do not rob the weak, and constant care that the stocks are healthy. Is this not imperative and pertinent today? Expressed in the ancient style, Varro says, "the symptoms of health are these; 'If there are many in a swarm and if they are clean, and if their work is even and polished. In purchasing the buyer must see whether they are healthy or sickly."

As these things are modern in tone, there are also ideas which are as curiously ancient and absurd. For instance, speaking of the origin of bees, Varro recognized that they are produced from their kind and "from the putrified carcas of an ox; and thus Archileaus says, "Wasps are the offspring of horses and bees proceed from a bullock." It is peculiar the way this view of bee genesis persisted, for it was not until the middle of the 17th century that it was completely demonstrated that bees proceed from bees as do other things from their kind.

We gain little idea of the extent of bee culture or of the methods; but may conclude that since the art was important enough for Varro to write about, it must needs have been an important industry.

Worcester, Mass.

DOCTORS IN BEE CULTURE DISAGREE.

H. F. COLEMAN IN SOUTHERN AGRICULTURIST.

In minor matters pertaining to bee-keeping it sometimes happens that the best informed disagree. Instances of this kind will be found in the following: In the Knoxville Sentinel of Saturday, March 2, 1907, Prof. T. C. Karns, a very clear and concise writer and master in the art of bee-keeping, judging from his writings, says: "When you have enough colonies and want to keep your bees from swarming, it may be necessary to go through the hives and destroy all queen cells. Without new queens, of course, there can be no more swarms."

If the professor, in this statement, has reference to what is known as after-swarms he is eminently correct, and if he has reference to swarming in general he is in error. When bees contract the swarming fever they begin to erect queen cells, and in about nine days the first of these cells are capped over, and if the honey flow continues and the weather is favorable a prime swarm will issue, the old queen going out with it.

This is what I call normal swarming, and I have found out by actual experience that when the swarming fever is once contracted, as is indicated by the presence of queen cells, the bees will swarm in spite of all that can be done in the way of cutting out the cells, provided, of course, that there is an old or fertile queen to go out with the swarm, and the conditions above mentioned are favorable. I have tried cutting out the cells time and again to prevent prime swarms, and have never found that it did the least bit of good—the bees would swarm in about nine days after beginning the cells just the same. If the old queen is removed so that she cannot get out with the swarm, swarming can be prevented by cutting out the cells. We should keep in mind that there is a difference between prime and after-swarms. Prime swarms are always accompanied with old or fertile queens, and after-swarms by virgin queens. Prime swarms always leave queen cells or brood in the old hive by which the colony can be perpetuated, and it does not seem to make much difference as to whether this means of perpetuation is in the shape of queen cells or only in brood from which queens can be reared. By the time a virgin queen is hatched, after the issuance of a prime swarm, the brood is too old to produce queens, and it is easy to prevent after-swarming by cutting out all the cells but one.

Elbert Hubbard, in the Philistine, as reported in the Industrious Hen of February, 1907, says: "Bees are very orderly and cleanly. They have inspectors that stay at the door of the hive and see that no bee comes in from the field without a good load of honey. Often if the bee has only a little honey, the inspector will turn him back and give him what is coming to him."

This to the old guard is a new idea. We all know that in the working season bees have guards at the entrance to their hives, but we have understood that these guards were to prevent the intrusion of robber bees from other hives, and to ward off enemies in general, and it is news to us that they act as taskmasters, and that when a bee returns to the hive without the regulation load of honey it is pounced upon and its ears boxed like it was a slave or an erring child: The most of us will take this statement with a great deal of allowance, and go on believing that bees from instinct are so industrious that they need no punishment to induce them to perform any duty, and that the guards at the door of the hive are only guards and not inspectors in the sense used by our friend.

A NEW STRAIN OF HONEY BEES. (?)

Reynoldsville, Pa., June 20.

Reynoldsville is troubled by the little busy bee. For the last month, ever since bees have begun to swarm, they generally migrate to some neighbor's back yard, and if a line full of nice white clothes are handy, in a short time they need washing. Members of the town council have been interviewed on the matter, and the council perhaps will be induced to take steps toward stopping it, as it is very annoying to the ones afflicted by the industrious bee. — Reynoldsville correspondent Punxsutawney Spirit.

The ordinary bees on their first cleansing flight after long confinement in winter or early spring, are liable to soil objects within fifty or a hundred feet of their hives, and without regard to color, but at other times, and especially in the swarming season, they will not do this; and a swarm may be wrapped up for hours in the daintiest linen without it being soiled.

But the bees referred to in the above clipping are an entirely different strain of bees and are procured by a cross between a would be reporter and a virgin daily newspaper. They will be known as the Polkadots. This new strain of bees promises to revolutionize bee-keeping; more than half of the bees in town have already been purchased by enterprising bee men within a week. With these new bees you can throw away your swarm catcher, discard all your non-swarming devices. Abandon your idea of sometime developing a strain of non-swarming bees (for bees will swarm whenever conditions are favorable), but if you will get in possession of these new bees, save your old linen and window curtains. Place your empty hives in some desirable place, hang up some white clothes around them. These bees have such a mania for dotting white clothes that the absconding swarms will be attracted by the white clothes, and finding a new home there waiting for them, they will enter it and go to work, and you have escaped the most perplexing part of bee-keeping. This seems almost too good to be true. It may only be another case of a daily paper in a small town being driven to desperation for want of manuscript; or it might be that the editor was so busy guarding the rest of the capitol building that he overlooked the above article. For although some pretty "big ones" appear in the Spirit at times, they are generally labeled in some way. However, it is claimed by those who have had experience with these bees that where the bee-keeper is on very bad terms with his neighbor, these characteristics are manifest to a slight degree, the more antagonistic the more perceptible, just like chicken and dog tracks in the garden. Persons wishing to test some of these remarkable bees, or wishing any information in regard to them can address,

Nectar and Venom.

—from Reynoldsville (Pa.) Star.

Reynoldsville, Pa., July 8, 1907.

Editor Bee-Keeper:

When my attention was called to the item referred to in the enclosed clipping, the accusation being so false and there being only one person in every thousand keeping bees here, it made the attack seem so personal that I felt like going after them with something a little keener than my pen point; and if they make any more such assaults I will go at them venom end first, and if on account of friendly relations or through fear of not getting their garden seed for free distribution in the spring, the local papers refuse to publish my article, I will try and find some other medium through which to reach the people. We can coax some with nectar, but we can deter more wth venom. I believe Pennsylvania bee-keepers will feel like declaring themselves in a body when I tell them that the Daily Spirit in which this item was printed in the first month of its publication, is edited by a person who has been helping to enact our State laws for the last ten years, and the paper is likely to have a wide circulation among law makers.

I would like to suggest that someone slip one of these Polkadot bees in his ear. He knows the signs, and will understand the rest.

Yours respectfully,
Nectar & Venom.
Full Cousin Jekyll and Hyde.

FORESTRY.

GEO. H. WRIGHT IN FLORIDA AGRICULTURIST.

Back in the early eighties, I was engaged in growing and planting forest trees in the Northwest, and during that time I received several volumes of books from Russia, which had been translated into English. These books gave a very clear account of work that had been done by the Russian government, and by individual planters, in forest tree planting.

The magnitude of the work was a surprise to me, and the more I read the more I became interested in what was being done.

The same summer I attended a meeting of the American Forest-tree Convention, held at the city of Minneapolis, Minn. There I presented the subject to several members of the society, among them the Hon. Charles Gibbs, of Abbottsford, Quebec, one of the most enthusiastic members, on the subject of planting forests, then in America.

Before the meeting adjourned, Mr. Gibbs and I had agreed that we would make a trip to Russia and Germany and see for ourselves what was being done. In a very few weeks thereafter, armed with letters from our Government authorities at Washington and in Canada, and also letters from the Russian ambassador, we started on our long trip to Russia.

On our arrival in London, each of us called on our minister, and with him on the Russian minister, and from him received letters to the minister of the Interior, of Russia, at St. Petersburg.

When we arrived at St. Petersburg, I called on our American minister, and with him on the minister of the Interior. We found this high functionary very enthusiastic and ready to give us all necessary documents to facilitate our investigations. By the way, without those documents we would have found it uphill work getting through the country and into places which gave us valuable information.

We soon found that the half had not been told about the magnitude of the work that was being carried forward by that great tyranical government. In brief, let me state that we found twelve hundred forest tree schools devoted to teaching students how to grow and care for forests. We found young men from the most wealthy families in these schools, being taught how to gather seeds, how to care for them, how to prepare the land and how to plant the seeds, nuts and cuttings, and all the rudiments of growing forests for profit and for ornament.

I well remember an expression of Mr. Gibbs', "This may be a despotic government, but it is far ahead of

America or England in one of the essentials of tree planting."

Thousands of intelligent young men are being taught to plant and grow trees. This same enthusiasm we found across Russia and up the Volga river as far as we went, to the fifty-fourth degree of north latitude. One peculiar feature we found on the Volga, the pear and cherry orchards. We found entire districts growing cherries, then a square cut off and then came pears, no mixture, all one kind of fruit or the other, never mixed. I found the railroads were planting belts of timber for snow fences, while here in America the roads were building board fences to stop the snow.

After visiting many parts of Russia, and receiving nothing but the most cordial treatment from government officials and from citizens and the largest land owners, being questioned by them as to what our countries were doing in the tree planting, we were obliged to acknowledge that Russia was far in advance of our countries, we left, passing through Moscow, to the German empire to make a short investigation of what was being done in that country.

While we found much to interest the tree planter, we also found that up to that time the Russian government was far ahead of anything that we had seen in any other country. Since then, Germany has been very busy planting forests, and if it keeps on in the way in which it has been going for the past twenty years, it will soon outstrip any other country.

Those old countries are doing a work from which America must learn a lesson or be the loser. This country must plant trees and save the moisture, or do as Spain has done, give up some of its most fertile soil to become a barren waste.

WORCESTER COUNTY BEE-KEEPERS' MEETING.

The Worcester County (Mass.), Bee-Keepers' Association held a field meeting at the apiary of Mr. J. S. Whittemore, on Pleasant St., Leicester, on Saturday, June 29, 1907. The resignation of President Burton N. Gates, of Worcester, was read and accepted. President Gates leaves the society to take a position as bee expert in the Department of Agriculture at Washington, D. C. The matter of selecting a new president was laid over till the January meeting. It was then voted to hold a fair in Horticultural Hall in Worcester, the same as we did last year. The exhibition this year will be held sometime about the middle of September. The same plan of popular lectures will be carried on and every effort will be made to secure the most prominent lecturers on bee matters in this country. The exhibition will be as much for the amateur as for the dealer in supplies. The exact date of the fair and further details will be published as soon as possible.

After the business meeting the party adjourned to the apiary where demonstrations of manipulation of bees were given by Vice-President Drake and Mr. Whittemore. Ice cream, crackers, and lemonade were served by Mrs. Whittemore at the close of the meeting.

A. H. Estabrook, Sec.

WHERE PRAIRIE BREEZES BLOW.

Oh, the scent of the sage comes drifting down on the breath of a prairie breeze,
From the plains where the bunch-grass ripples brown, like the waves of the summer seas.
And the dear, sweet smell of the hill-side pines, and the cottonwoods that grow

In canons deep, comes home to me when the west winds gently blow.
I can see the bulk of a miling herd in the rainclouds massing black.
(By the angry breath of the storm-wind stirred) and riding on its track;
I can hear the rush of a mad stampede when the lightnings flash and glow,
And wild hoofs beating the prairie sod, when the stirring west winds blow.

Oh, for the feel of a braided rein and the plunge of a prairie steed,
And the brave, true hearts that open plain and the wind-swept mountains breed.
Oh, for the days on the long divides, and nights by the campfire's glow,
Hard on the trail of the herds that roam where the prairie breezes blow.

—Bertrand W. Sinclair in The Bohemian.

THE BEE-KEEPING WORLD

Staff Contributors: F. Greiner, Adrian Getaz

Contributions to this department are solicited from all quarters of the earth

ITALY.

Steam and Electric Knives.

Two new styles of uncapping knives are offered to the world by M. Tonelli, Italy. The blade of one is connected with an electric apparatus and kept "hot" while working with it. The other one has a hollow blade and steam is introduced into it by way of a rubber tube through the wood handle. In this manner it is kept hot while at work. The rubber tubing, they say, does not bother at all.—Phaelz. B. Z.

Larvae of the Wax Moth.

In a small pamphlet Rauschenfels, of Mailand, Italy, gives the life history of the wax moth very explicitly. It was written some years ago, but the facts are as true as ever. I quote from it the following which may be of interest to many:

"After mating the female moth deposits inside of two or three days about 80 small white or yellowish eggs which grow darker with age. They are usually found in the accumulation on the bottom board, in cracks inside, seldom on the combs themselves. As soon as the eggs have hatched the minute worm spins for itself a tube-shaped house for its protection. It feeds on wax and bee-cocoons, also pollen, which, however, is not necessary (?) for its development. Wax is their principal food, but in absence of it they gnaw wood, leather, paper, dry leaves; they even eat their own excrements. When the larva has reached its full size it leaves its hiding place and encases itself in a cocoon somewhere, either between the frames and hive wall, or some similar place. Sometimes it takes the risk of making its way through the entrance of the hive to a secure place outside, and is thus often surprised by bees and killed. The cocoon of the large variety is smooth; that of the small variety rough and mixed with bits of wax. The time required to mature the mature insect from the egg is fifty days. In case of the small variety a few days less. They pass the winter in dormant state. The pupae endure a temperature of 10 degrees F. with impunity. The eggs remain unchanged all winter and ready to hatch as soon as the temperature becomes warm enough in spring.—Deutsche Imper a-B.

GERMANY.

Few Implements Needed.

It is surprising to see the many different apicultural implements pictured in price lists received from Germany. Whether these are necessary for the successful management of an apiary may be questioned. It is stated that great old Dzierzon was satisfied with a "jack knife," and some have given him the title "a modern Diogenes."

Single-walled hives are not as commonly used in Europe as in America. Where they are mentioned, I notice, it is advised "not to paint them."

Editor Freudenstein finds no better use for pollen combs than to melt them for wax or sell them to someone else.

"No Cause for Action."

A suit was brought against several parties in Wuerzburg on September 28 last, for practicing fraud in selling Havana honey for A No. 1 extracted honey. Adulteration could not be proven, but it was admitted that the Havana honey bought was dirty, full of dead bees, etc., and that it was warmed and strained, thus removing all foreign matter. This honey was advertised in different papers as pure unadulterated extracted honey from their own bee yard. The bee yard proved to be one swarm of bees. The suit was dismissed, the verdict—"no cause for action."

Wygandt says in his book on bee culture, in regard to old brood combs and the honey stored in such: "If anyone who says that honey from old brood combs is as good as that from new combs, will make an examination with a magnifying glass after moistening the matter contained in old cells, he will become convinced that young bees leave excrements in them which, of necessity, must taint the honey; if he is still satisfied that everything is a model of neatness, let him be consistent enough to taste of the brown juice obtained by soaking the comb in warm water for a while. This will satisfy him."—Leipz. Bztg.

Joh. Binder regards the moderate breeder and swarmer as the best bee. The German or brown bee fills this bill for him. The queen excluder is not needed with such a bee, so he says, in Allgem. Z. f. Bzcht.

Colony Records.

Gerlach, Eisleben urges the keeping or records of each colony. He uses a card and makes all entries with a lead pencil. (This is a good practice, sure! but tack on that card, so it cannot become lost. Broken sections do pretty well if one has enough of them. —F. G.)

Treating "Slumgum."

Ill. Mon-Bl., in speaking of "slumgum," says that it contains some wax and is for this reason bought up by peddlers at about one cent per pound. There are special establishments which treat this "slumgum" with benzine and thus extract every bit of the wax. The refuse is then used as a fertilizer. One firm alone puts out twenty carloads of such every year. It contains about 7 per cent. of nitrogen and 1 per cent. of phosphoric acid, 18 per cent of potash, and looks like a dark colored coarse powder.

Bee Insurance.

Many of the bee-keepers in Germany pay 1½ cents per colony to an insurance company, the latter paying all damages which may be caused by the insured bees. This is not a new thing, but I do not know that it has been mentioned in our bee journals before. There may be room in the United States for a similar institution, as our bee-keepers' associations do not fully protect us.

SWITZERLAND.

Origin of Formic Acid.

According to Planta the formic acid in the honey originates in the blood of the bee. Reidenbach claims old brood combs produce the acid indefinitely. Dr. Bruennich, defending the Planta theory, seems to get the better of Reidenbach. Nectar, he says, contains not a trace of it, but as soon as the bee gathers it and is stored in the stomach of the bee, the presence of the honey preservative, formic acid, may be detected.

Ask the Boy.

"How much honey may be given a boy of five, with safety, per day?" is a question answered by a number of different men in Schwz. Bztg. The majority advise small doses, from 2—3 teaspoonfuls. I would not hesitate to largely increase the dose if I had the honey.

Neat House Apiary.

A very nicely kept house apiary is shown in the Schwz. Bztg. Its owner is J. Kung. The building is covered with trellised pear and apple trees. It seems to require a great deal of care to keep these trees where they belong, but the arrangement looks very neat, and the owner says he obtains fine fruits from the trees. A prominent portico covers each entrance which can thus not be hidden by the foliage.

Favors the German Bee.

Dr. Brunnich agrees with Joh. Binder, that the common brown or German bee is the best honey-producing bee in existence for his locality. He says not everything depends on great prolificness of the queen, or, better expressed, "of the colony of bees." The bees which breed only moderately, but at the right time, give better net results than the bees unduly prolific. Another factor, largely responsible and often not sufficiently taken into account, is the longevity of the bees themselves. He observed yellow bees and hybrids having their hives full of brood all the time and still not being as strong as other colonies of the German blood having not near so much brood in their combs. In this greater longevity may be found the explanation why some colonies give a greater honey yield than do others.—from Leipz. Bztg.

Standard of Excellence.

A desirable and profitable stock of bees must be up to the mark in the following named eight points, according to Dr. Brunnich:

1. Right amount of brood at the right time; 2. Longevity of workers; 3. Good workers; 4. Non-swarmers—i. e. nearly so; 5. Economy in using up stores; 6. Order in the brood nest; 7 Early and short swarm period; 8. Supersedure of queen at the right time (at the close of the harvest).

AUSTRIA.

Dog in the Manger.

A bee lawsuit is now recorded on the statutes in Austria which may serve a good purpose in the future. School Director Jarosch, in Niemschitz, maintained an apiary of sixteen colonies of bees in the school garden, partly for instructive purposes. The village president wanting to become a bee-keeper himself proposed to Jarosch that he surrender one of the swarms to him, but the latter declined. In his ire the village president ordered Jarosch to discontinue keeping bees, and suit was brought. The decision of the court was, "no cause for action." The village president then set his son to ploughing near the bees one hot August day. The boy was stung, also a neighbor. Another suit was brought and also lost. This ended the matter.

Sow Pansy Seed Now.
Who does not love Pansies? They are the most beautiful, most charming, and most fashionable of all flowers. Every one should grow a bountiful supply. Pansies sown at this season produce incomparably the finest and largest flowers of the brightest colors. Surely no reader will miss the unparalleled offer of A. T. Cook, the Pansy Specialist, on another page. Send to-day and get the big beauties. Do not put it off.

KALIFORNY KINKS.

A. KINKLET.

WHEN moving bees, cut a strip of burlap two or three inches wide, the length of the entrance to your hive for each colony, and when ready to close them, leave these pieces in a pail of water. Crowd one into each entrance with a jack knife; better than sticks, screen or anything I ever used. No hammering to disturb the bees, and the moisture tends to quiet them, as well as being much the quickest way. Try it.

For the top have a frame of 7-8 inch stuff covered with wire screen, the size of your hive body, with a piece of tin tacked on each corner one inch wide and five inches long, extending two inches down to tack to hive, with tacks or two-penny fine nails that can easily be loosened with a screw driver. Use butter tub staples to fasten supers to bodies as one of the handiest things.

Put a stick or stone under the back of the hive in the fall, tilting it slightly forward. A leaky hive, if sloping well to the front, will often not be seriously damaged, while one level or sloping back will often have moldy combs and become sour.

Use a common milking stool when going through those spring manipulations. It will save you many a backache.

Cut six inches off one of those old hand saw points. Put a wooden handle on the small end. File the other end square. Sharpen the teeth, and if this is not the handiest all-round hive tool, I do not want a cent. It cuts off old frames without jar; scrapes two top-bars at a time; carries a good spoonful when cleaning bottoms; just the thing to crowd between hive and super; moves a frame without bruising it. It is simply O. K.

In transferring, pierce the top-bars with an awl and insert a common toothpick, letting it extend down an inch into the combs until the bees wax them in.

Corona, Cal.

Charming Post Cards Free to All.
No reader should miss the grand Pansy offer of A. T. Cook, on another page. He gives beautiful Post Cards to purchasers. The cards are of high character. They receive unbounded praise. There is nothing like them. You will be sorry indeed to miss these delightful cards.

THE

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We do not acknowledge receipt of subscriptions. Your receipt of the journal is evidence of your subscription having been entered.

When the time expires for which The Bee-Keeper has been paid, it will be mailed in a red wrapper, and the red wrapper will continue until the subscription is paid up. Subscribers will confer a favor by carefully noting the color of the wrapper used, and when the red one appears, by promptly sending renewal.

June in New England proved a disappointment to the bee-keepers, but July is making up for it, and from many quarters we hear of a heavy flow of fine white honey. (M.)

From a return furnished the British Bee Journal by the statistical office, H. M. customs, it is learned that the value of honey imported into the United Kingdom during the month of May, 1907, was 3,302 pounds.

An abnormal amount of swarming was reported in Southern New England during June, and one of the strong features was that often the hives were far from well stocked with brood or stores. It was a "freak" month all around. (M.)

If you rear your own queens, strive for the best, and bear in mind that to get such, the larvae must be well nurtured from the start and the young queens have immediate freedom on the combs. The candy-stocked cage for the young queens is to blame for many a poor and short lived queen. (M.)

Every little while there appears an article on the virtues of the "black" bee. Let the novice be not misled by such articles. While the black bee makes handsome comb honey and while under some conditions it now and then makes a good showing in size of yield, it has faults of temper and habits which make it a curse to most persons. Its vices are not to be tolerated and its virtues may be found in other races. (M.)

Writing from Groton, N. Y., July 14, Mr. D. H. Coggshall says that alsike is in full bloom but is yielding very little nectar. Basswood is about ten days late this year, but promises well. It is reported that foul brood has made its appearance in Cayuga county, and as a result, Tompkins county boys are becoming somewhat anxious. It is sincerely hoped that the authorities will take prompt and efficient steps to prevent the spreading of the malady. (H.)

With some correspondents the idea seems to prevail that prices of apiarian products are steadily declining, and that there will soon be "no profit in the business." As an example of the comparative markets at the present time and twenty-six years ago, we present the quotations published in some of the bee journals, July, 1881, and ask the reader who may be sufficiently interested to do so, to turn to the quotations printed in The Bee-Keeper last month—just twenty-six years later:

> New York—Best white single combs in small sections, 14 to 17 cents. Extracted white clover and basswood, 10 cents. Buckwheat, etc., 7 cents. Beeswax, light yellow, 24 to 25 cents. Dark, 19 to 22 cents.
>
> Chicago—Comb honey quotable at 14 to 16 cents for choice. Beeswax quiet at 22 cents for good to choice yellow and 17 cents for common.
>
> Cincinnati—Extracted honey, 8 to 10 cents. Choice white comb honey, 15 to 17 cents. Beeswax, 20 to 23 cents. (H.)

REQUEEN NOW.

One of the important, or, we might perhaps more properly say, the most important of things for the bee-keeper to do at this time of year, is to requeen his colonies. Careful comparison of different apiaries, some of which were requeened annually, others biennially and others allowed to go as they pleased, has shown beyond question the superiority of the annual over all other plans. Having all queens of a uniform age has advantages apparent to the merest tyro and having the queens young and vigorous ensures strong colonies, other things being equal. Requeening in August enables the colonies to stock up with young bees for winter, and if the requeening is done early in the month it will materially help to secure a crop of fall honey in sections having a flow at that season. (M.)

IMPROVING OUR STOCK.

One of the clever ruses for booming the sale of queens is to write of the bumper crops produced by some individual colony and then offer a good round price for the return of queens sent out from the mother of that colony. Few queens are ever sold back, and every customer fondly thinks he has drawn a $500 prize. The average bee-keeper will do quite as well to raise queens from the best queen he has as he will to send his money after one of the $500 will-o-the-wisps. If he has no satisfactory queen-mother then let him buy a few untested queens from reliable queen raisers—not the big dealers, who buy and sell anything that is a queen. Test the queens by putting them at the heads of full colonies and carry them through a complete year. From the best two select one for a queen-mother and the other for a drone-mother. An abundance of good drones is as important as good queen stock.

What may be accomplished by intelligent observation and painstaking selection and breeding was vividly shown by Mr. Loucks in his article in the July number of The Bee-Keeper. (M.)

THE NATIONAL CONVENTION.

It is said that Harrisburg, Pa., is to be the next place of assembly for the National. It is also said that the "ring" interests are stronger in Pennsylvania than elsewhere. Fortunately the big bee men do not depend on the National for anything. Speaking of "depending on the National" recalls the following: The National, by its sponsors, is said to be always ready to furnish educational literature along such lines as will discourage legislation adverse to bee-keeping interests and encourage such as will help it. A recent call on the general manager for a score or more copies of such literature brought just five sloppy pamphlets of no possible value for the purpose. A little less wind and a little more "real goods" might be a wholesome change. If a member wants to see just how valueless the National is to him, let him try to get from it some of the much talked about benefits. (M.)

HIVES.

For some little time there has been an apparent effort to promote a boom in "divisible brood chamber" hives, i. e., hives having two or more chambers four to six inches deep for the brood nest. Such hives do possess certain advantages but the advantages are not sufficient to warrant the average bee-keeper making a change from any other standard system. The writer has used the divisible hives for over twenty years and at present has one apiary of them, but notwithstanding the benefits of the system he is making all his new apairies of 10-frame L hives.

All who wish to try the divisible hive system can do so by using common shallow extracting supers, those having frames five and one-half inches deep being best. It is essential that the frames be held fast in the hives by means of springs or wedges, otherwise when trying to separate the chambers the frames are often started from the under one and trouble ensues. It should be borne in mind by the experimenter that such hives are for a special sort of management and are chiefly intended to, as nearly as possible, do away with handling frames.

Now is a good time to stock a few such hives for experiment. There is time enough for the bees to get established for winter and the colonies will be ready for a full season's trial next year. (M.)

THE BEE-KEEPER AT HALF PRICE.

The editor of The Bee-Keeper has for some time felt that a reduction in the subscription price of the journal would probably be productive of heavy gains in the list of subscribers, even though the present price is quite as low as is possible in the production of a paper of this size and quality, with hardly four thousand subscribers. If, however, the list could be about doubled the cost of production would be decreased to a considerable extent.

All persons concerned in the management of The Bee-Keeper, however, do not share the editor's opinion, as to the effect of the reduced price suggested; but permission has been granted for him to put his plan to the test, and it is, therefore, proposed to offer The Bee-Keeper at 25 cents a year during the remaining five months of the current year, to all new subscribers in the United States, Cuba, Porto Rico and Mexico. To Canada, 35 cents. They may subscribe for as many years as they wish at this reduced price, but cash must accompany the order for the entire period for which it is desired to subscribe.

Twenty-five cents for a bee journal, of 36 to 40 pages a month, is practically giving it away, and we believe that if our present readers will but call the attention of other bee-keepers to the fact that they can now subscribe at 25 cents a year, we can add another four thousand readers to our list before the close of the year. The editor has faith to believe that The Bee-Keper has several thousand friends throughout the land who will be willing to extend such a favor and thus assist in the consummation of the plan.

If any reader feels disposed to place a few sample copies in the hands of his bee-keeping friends, along with his invitation for them to subscribe, we shall gladly mail as many copies as he can use.

Now let the new subscriptions roll in. Let us make a record during the five months, and thus be enabled to continue our improvements. (H.)

A NEW MONTHLY.

The American Bee Journal, for many years a weekly periodical, appeared for July as a monthly, and will be so issued in the future. The subscription price has been reduced to 25 cents a year, and a very marked improvement in the general appearance of the paper results from the use of a high-grade stock of paper. The cover design of the first monthly edition is the handsomest that has adorned any bee journal of modern times, being a skillful combination of photograph, wash and air brush. Really artistic pictures are rare in the apicultural press, but the American Bee Journal's cover scores an average above ninety. Congratulations, Brother York! (H).

NEW BOOK ON BEE DISEASES.

"Report of the Meeting of Inspectors of Apiaries, San Antonio, Tex., Nov. 12, 1906," is the name of bulletin No. 70, issued by the Bureau of Entomology, U. S. Department of Agriculture, June 17, 1907. It is written and compiled by Dr. L. O. Howard, entomologist and chief of the Bureau. The work contains about 80 pages, and is one of the most interesting and instructive compilations along these lines that has come to the notice of The Bee-Keeper. Dr. E. F. Phillips advises that the book may be had for 15 cents, by addressing the Superintendent of Documents, Government Printing Office, Washington, D. C. Postage stamps are not accepted, however. (H.)

BEE-KEEPER'S TERRIBLE FATE.

Savannah, April 21.—"Pop" Shell, a famous bee-keeper residing near here, who has been stung more than any other man in the United States, is dangerously ill, suffering from a most peculiar disease.

He was so inoculated with the poison that he believes himself a honey bee, and from morning until night he keeps up a low, buzzing sound.

Shell hovers over the flowers in the garden, and armed with a small syringe, tries to extract honey from the buds. Always on the move, the poor man is wearing himself down to a shadow, and the physicians fear that unless the poison can be overcome he will die.

He is usually mild, but when aroused to anger he tries to stab his tormentors with a large hat pin. Fortunately these spells are not frequent.

The foregoing clipping from a New York newspaper is terrible indeed, if true. We, however, don't believe it; for, in the first place, if "Pop Shell" were a "famous bee-keeper" he would be a subscriber to this journal—which he is not. And if he was, he would have been a student of A. C. Miller and would therefore not have worked himself to death. He would have known that such is not the habit of the bee. Again, imagine a reader of The American Bee-Keeper, with access to our Queen-Breeders' Directory, being stung more than any other man in the United States. Our readers don't belong to that class of bee-keepers.

The case, as cited, is a sad one indeed, but the future career of its author, as a newspaper reporter, promises to be sufficiently bright and cheery to fully offset the pathos of his yarn. (H.)

WORCESTER COUNTY INSTITUTE.

The attention of the bee-keepers of New York and New England is called to the annual Institute of the Worcester County Society, to be held in Worcester, Mass., about the middle of September. The exact dates will appear in our September issue. The Institute is run by and for the bee-keepers, and consists of a general exhibit of the products of the bee, supplies, etc. Lectures and demonstrations are attractive features.

Persons desiring to exhibit should write to Mr. A. H. Easterbrook, Secretary, Clark University, Worcester, Mass.

Plan to attend; it will pay you. (M).

FOOD ADULTERATION IN TEXAS.

C. S. FRAPS.

Bulletin No. 91 of the Texas Experiment Station is entitled "Food Adulteration in Texas." The Bulletin discusses the subject of food adulteration, the Texas food laws, the National Pure Food and Drug Act, and the extent and character of adulteration as found in a number of samples collected in representative Texas cities and subjected to analysis. The number of samples examined and the number found illegal are as follows:

	Total Number.	Number Illegal.
Sausage	32	28
Dried Fruit	6	5
Olive Oil	8	1
Jelly	19	12
Catsup	10	6
Grape Juice and Cider.	10	1
Soda Water	8	7
Salad Dressing	6	2
Maple Syrup	2	2
Honey	8	1
Molasses and Syrup	8	7
Canned Goods	34	4
Vinegar	16	13
Extract of Lemon	16	9
Lard	4	2
Baking Powder	12	1
Olives	1	0
Shredded Cocoanut	1	0

This bulletin will be sent free of charge to any one on application to the Director of the Experiment Station, College Station, Texas.

REPORT OF THE COLORADO STATE BEE-KEEPERS' CONVENTION.

CONTINUED FROM LAST MONTH.

PROGRAM COMMITTEE.

Mr. Rhodes: I feel like I ought to make this report, as the committee was scattered here and there and elsewhere the program we have here we had to do by correspondence and very little help, and we came up with the very best we could do, with the exception of my part. I took the liberty of writing for questions from different bee-keepers and I laid them away in an envelope very carefully and left them there, and there they are yet. Guess this part of the committee will be all right. The difficulties have been so great that I am not satisfied with this work myself. I would not have had a single paper, but one of the members of the committee has a paper and it is all right; so we arranged for one paper for each session. We have done as well as could be under the circumstances.

Motion made and seconded that we accept report and discharge the committee.

"How I Succeeded in Retailing Extracted Honey."

Paper by Secretary S. Francis.

About three or four years ago I put up a lot of extracted honey in Mason quart jars. I took them down town to a grocery store, and arranged for the payment later on. I left them there and they went like hot cakes. The next season I put up 36 dozen of the same jars and the same result, and the following season to have more. I think it is a good plan to supply the home markets. I left five dozen at a store; result was that the next time I came along the honey was candied, so I had to go to work at reliquefying honey. I want to make it a point never to deliver too many jars of honey at any store at one time. One other thing in regard to peddling honey I found in going from house to house, that leaving a sample of honey to let people taste is a very good thing. This is a very common saying: "We don't care for honey," but if they may sample it they will order a jar. Of course, a man don't want to persist; you might lose a customer for all time. The next time they would see me coming they would order without hesitation. Another plan I found is, this year not being able to retail honey I put up a honey stand, and it makes quite a nice exhibit and calls people's attention, and they ask for honey. Another thing I might speak of in regard to putting up extracted honey. I had a small tank made to liquefy honey by putting the cans in hot water and letting them stand over night. I was instructed that it had to be bottled up tight when it was hot, and result was it became foamy on top. When I was down to Denver I asked Mr. Frank Rauchfuss about it. I found he let it stand over night and then bottled it, and that it would be nice and clear. Strain it through four thicknesses of cheese cloth before letting it stand over night. Another thing is in regard to labeling honey. They should be clean and attractive. I want to speak about adulterated honey in Lafayette and Louisville. I found some of it in those places. I received a letter from Mrs. Wright asking me to send some of the adulterated to her for analyzing, but as the grocer informed me they had bought it for adulterated honey and were selling it as such, I thought it unnecessary to send any to Mrs. Wright. The adulterated honey was labeled "Kellogg's Pure White Clover Honey," and it was put up by Bliss Syrup Company, Kansas City.

Mr. Pease: For how much do you sell pints of honey at wholesale?

Mr. Francis: 20 cents a pint wholesale, 25 cents retail.

F. Rauchfuss: What do you figure on making by putting up extracted honey in that way?

Mr. Francis: I don't know as I can answer this question direct, but I figure about making 12 cents a pound on the honey.

F. Rauchfuss: 1½ lbs of honey at 12 cents, eighteen pounds for dozen jars that would make $2.16, a case of jars is no less than 40 cents, that is $2.56, and selling them for $2.25, what is he getting for his honey?

H. Rauchfuss: I used to put up

honey in small jelly glasses, and I find I cannot put up any more honey, as you have to take into consideration your time and your heating apparatus. You will find your honey will not net you 12 cents per pound; if you get 7 or 8 cents you are doing well. Then you are bound to lose money some way or other, and when you call they ask you to come around again in a few days "when my husband is in." I found it was not the best plan.

Mr. Bader: That used to be the only way of selling my honey for a number of years, and I figured on my honey bringing me about 8 cents. I sold quite a number of dozens, and I always figure on the cost of jars five cents, as when I got the jar back I always allowed them five cents, but I had to have the label on the jar, I found out they would give me a poorer jar in place of the one sold them. Sometimes when I was on my way home and I had a few jars I would sell them a little cheaper, till I found out it was said that I sold honey over in another part cheaper, so that was another thing I had to contend with.

Mr. Francis: I never lost a single cent on the honey this year.

Mr. Porter: I have put up a great deal of honey for bottle trade. I think a good deal depends upon the locality. When a man is situated in Denver it does not pay a bee-keeper to deliver to the trade; I am satisfied about that. You go into a grocery today, "we don't want any." You know then it does not pay a man to travel over the city more than once in two weeks, so they say we have a custom of paying once a week. Well, if you want money you can go after it. Probably you wait two weeks. "Well, what is the matter with you, are you dead?" Common expression among grocers. "We have been out a month," when you had been there but two weeks before. "If you cannot be here when we are out of honey we cannot patronize you." Well, all these things are aggravating, and you have to lose a bill occasionally. Out in the country, where everyone is honest, it is different. I feel it is the duty of some bee-keeper in every locality to see that their market is supplied with honey. Probably they get honey from Kansas City and Omaha. If the store is well supplied with their home product probably other honey would not come in. A young man from New York had not been in the mountains we concluded to take a trip and take a load of honey along. We went up in some of the mountain towns a day or two got the people rusing after us to buy honey. We went over in the other part of the city and the same occurred there. We got ten cents per pound for extracted and comb honey, a good price.

Mrs. Booth: Now a great many people can peddle honey at good advantage. I believe if they can sell it at a good price let them do so, and if they are not able to, deliver it to the Association, but I believe let people do about it as they see fit. I don't think every one is adapted to it.

Mr. Collins: When I was a lad I went as a book agent, but when I came to a door I would not knock but turn away; could not get the courage to knock at the door, so I sent the books back to the company. I would rather hunt rabbits than peddle honey.

Mr. Rhodes: I think we can do better than that. I want to relate just a little experience. There were some bees in the community where I lived, and it was said in the community, "We don't like honey," but then they came and got a little honey at the house, and before two weeks were out they came after more. If we sell all the honey we can among our own people, it will pay us to advertise and get rid of a large part.

A. F. Foster: At one of the places I visited was a man who said, "I don't like your Colorado honey." He was at the house and I asked him to sample some. He smacked his lips a couple of times and took another taste. Before I left the house I had an order for ten dollars' worth. I believe in taking some honey along with you when you go visiting; it helps to get people to try the Colorado honey.

Mr. Kaiser: In the way of having an exhibition hive, taking it around to the different schools, explaining ways of bees and production of honey, I believe it would be a good idea, as the children would become interested and would buy honey.

Mr. Booth: I am old, but am able to learn something, and I want to say that when my wife and I go visiting again we will take honey instead of whiskey.

Mr. Francis: Can anyone inform me how Bishops, Los Angeles, can sell honey at $2.25 per dozen?

F. Rauchfuss: Those people buy their honey in carload lots and pay 4¼ cents per pound and buy their bottles much cheaper than you can, for they have appliance for putting them up, and for that reason they make money where you would lose money.

H. Rauchfuss: Mr. Francis puts up his honey and goes ont to sell it, and collects for the honey. Here this man comes with his honey, he has all kinds of groceries and carries that as an accommodation. I believe it is a great deal better to try and build up your home market, and I found it would pay to put up more 60-pound cans, as I don't think it profitable to peddle honey; sooner give it away and advertise.

Mr. Francis: In regard to my time, while other bee-keepers spend their time in hunting rabbits, I come home with a few dollars after peddling honey.

Mr. Bolinger: Using honey for medicine; I know a good many people use honey as cough syrup, and have sold considerable that way.

Mr. Tomlin: I would rather have them use honey in cooking, and so forth, than have it for medicine, as when they regard it as medicine they keep it on a shelf until some one has a cold and, therefore, do not use very much.

Question: Can we, as the Colorado Bee-Keepers' Association, establish and maintain a practically isolated queen mating yard in which to have our breeding queens purely mated?"

V. Devinney: It seems to me there is some difficulty in the way that it cannot be done without state aid. The state has so many bills presented to it, with demands of all kinds, for more than the whole state is able to give, if half of the bills are granted. Don't think the legislature would know what a queen is from a drone and laugh at such an article.

O. Foster: I don't see why we need state aid; I don't see why there should be any expense, why the Association could not be permitted to establish it. We can find an isolated spot either out on the prairies, and especially where we can get a place where there is an orchard, so as to have the location for mating queens over trees, as I have heard that queens are mated over trees. If there is a satisfactory spot why cannot we see there are no bees within ten miles, have some one in charge during the mating season. If we can get queens mated in such a way that we know how they are mated, we have something special.

H. Rauchfuss: I can tell you my experience. There were three different times I took a lot of queens and drones out of the reach of other bees —no bees within seven miles in either direction. I had about 150 queens on the trip. I took a very strong colony, made it queenless, gave it all the choice drones possible and took it to this place with the queens. I kept virgin queens for seven days, I had the entrance covered with queen-excluding zinc. Now I took them out and saw them flying and brought them back. Some queens were lost, a good many queens commenced to lay. I got another batch ready, I took them out and it was so hot that the bees did not fly. Heat was intense. I put honey around the entrance to try to make them fly, but there they would hang from morning to night. I went home and came back a week later; the honey was still there, queens were not mated. I am going to try it again and go at it a little earlier. Latter part of May and through June there is quite a little honey to be gathered from the prairie blossoms, and perhaps I will be able to get queens mated. I have known that there is a place out east where there are big cotton wood trees, where drones are flying; can hear the drones making a noise flying over those trees. There are a great many bee hawks which injure the colonies, they suck the blood out of bees. In the early part of the summer these bee hawks are not as numerous. I think the plan can be made a success.

Mr. Gill: This is a subject I have been interested in, and I was thinking when Mr. Rauchfuss was speaking of it, did he not take the wrong time of the year? I think that three or five miles is sufficient. I have gotten different kinds of queens from Mr. Davis, perhaps 350. I must say that he says his apiaries are located just about three miles apart. His queens are always what he claims them to be. I will agree the trees are where the drones come, and I think that queens are directed by that noise.

Where they are gathered the noise attracts the queen.

O. Foster: I think we are coming to that question in the proper way—is it practical at all. Let every member feel himself as a committee of one to find a place of such description.. If so, we will be in a position to do so.

Mr. Collins: Near Boulder there is a place which could not help but be ideal. You may go four miles before we touch a bee yard.

Mr. Bader: You are mistaken; there are two apiaries further north than mine.

(To Be Continued).

PREMIUMS FOR COLORADO BEE-KEEPERS.

At the meeting of the Committee on Exhibits held March 2, at Denver, the following premium list has been drawn up by the committee and the following list of premiums will be given away at the next meeting of the Colorado State Bee-Keepers' Association. All paid up members are eligible to take part in this contest.

	1.	2.	3.
No. 1. Best Nucleus Italian Bees & Queen in Observatory hives............	$3.00	$2.00	$1.00
No. 2. Best Nucleus Carniolan Bees & Queen in Observatory hives..........	3.00	2.00	1.00
No. 3. Best Nucleus Caucasian Bees & Queen in Observatory hives............	3.00	2.00	1.00
No. 4. Largest & best display of bees of various races	5.00	3.00	2.00
No. 5. Best case of white comb honey	3.00	2.00	1.00
No. 6. Best case of light amber honey	3.00	2.00	1.00
No. 7. Best & largest display of comb honey........	5.00	3.00	2.00
No. 8. Best display of comb honey to be product of a single colony for the season of 1907	3.00	2.00	1.00
No. 9. Best 50 lb. of white extracted honey in suitable glass jars for retail trade	3.00	2.00	1.00
No. 10. Best display of 50 lb. of amber (light) extracted honey in suitable glass jars for retail trade.............	3.00	2.00	1.00
No. 11. Best display of granulated extracted honey in small packages	2.00	1.00	.50
No. 12. Best & largest display of extracted honey..	5.00	3.00	2.00
No. 13. Best displav of 10 lb. yellow beeswax	2.00	1.00	.50
No. 14. Best display of special designs in beeswax...	2.00	1.00	.50

We have also drawn up a few rules for the judging of these exhibits which are as follows:

The best case white comb honey, the best case light amber, and the best photograph, exhibits Nos. 5, 6 and 16, to become the property of the Association, the premium to be paid owner of the honey.

In judging bees the correct markings of each race, quietness on the combs, number of bees in the observatory hive, the appearance and general condition of the comb on which they are displayed and the appearance and the condition of the hive in which they are exhibited should be considered in their proper rotation.

In judging white comb honey the grading rules adopted by the State Association should be accepted as the standard. In light amber honey the same rules should apply excepting color, which matter should be left to the option of the judges.

In judging extracted honey the flavor, color and body of the exhibits should be considered first, then the attractiveness of package and arrangement of the display. In granulated honey, flavor, texture and attractiveness of package and arrangement of exhibit should be considered.

In judging beeswax, color, freedom from impurities, and perfection of form to be considered.

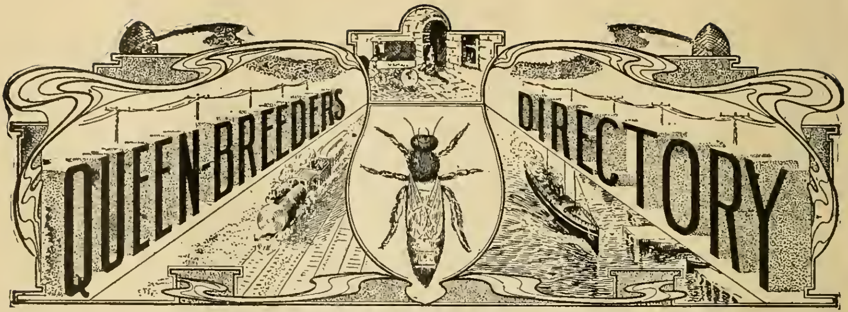
	1.	2.	3.
No. 15. Most instructive display of Apiarian Products, and of the various uses made of Honey & Beeswax	$ 5.00	$3.00	$2.00
No. 16 Best Exhibition of Photographs of Apiaries and things pertaining to Apiculture	2.00	1.00	.50

THE COLORADO HONEY PRODUCERS' ASSOCIATION.

Committee on Exhibits,
Frank Rauchfuss,
W. L. Porter,
J. W. Pease,
M. A. Gill,
A. Elliott.

Prize Pansies for All Our Readers.

To introduce his Giant Pansies, A. T. Cook, the reliable seedsman of Hyde, N. Y., will mail OUR readers his complete Pansy Collection—comprizing seed of 50 lovely Everblooming Varieties: Life-size Picture in 10 colors; Treatise on Growing Pansies—giving all the secrets of success—all for ONE DIME or 12c. in stamps. NOW is the time to plant the seed. Don't put it off. 3 Pansy Collections, 40 vari. Winter Blooming Petunias, and 10 charming new Post Cards ALL for 30 cts. Every reader, and every reader's friend should secure this great bargain. Address as above and be sure and name this paper.



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MOORE'S LONG-TONGUED STRAIN of Italians become more and more popular each year. Those who have tested them know why. Descriptive circular free to all. Write J. P. Moore, L. Box 1, Morgan, KY.

BETTER THAN AN ISLAND—No other bees within five miles. All fast trains stop here. I consider the Banat Caucasian bees the best and gentlest in the World. One colony made 32 fancy sections of comb honey during September, seventy Italian colonies did not make a pound. Banat Caucasians bred here, other races in out yards. Banat Caucasian queen $3.00. Caucasian queen $1.50. Golden Italian 75 cts. Order now D. Collins, Ph. D., Emporium, Pa.

THE A. I. ROOT CO., Medina, O.—Breeders of Italian bees and queens.

QUALITY QUEENS are the best Italians yet. Send for circular. H. H. JEPSON, 182 Friend street, Boston, Mass.

MINNESOTA QUEENS—Try our northern breed queens. Three banded and Golden Italian queens,untested 75 cts.; tested $1.25, hardy and prolific. We want your orders and guarantee safe arrivaland satisfaction. Orders booked now, Write for circulars to Mennie & Fenton, Pine Island, Minn.

W. J. DAVIS, 1st YOUNGSVILLE, PA. breeder of choice Italian Bees and Queens. Quality, not quantity, is my motto.

ITALIAN QUEENS AND BEES. E. E. Mott, Glenwood, Mich. Money Order office, Decatur, Mich. Jan. 8.

BUY YOUR QUEENS from the Red Clover Apiary. Bees guaranteed to work on red clover. Fine 3 and 5-banded untested Italian queens, 60 cts. Tested, 75 cts. If wanted before June 25, add 15 cts to above prices. T. L. Fajen, Alma, Mo. Dec. 7.

JOHN M. DAVIS, SPRING HILL, TENN.—Has greatly enlarged and improved his queen-rearing facilities. Two unrelated Carniolans and a dark leather Italian lately imported. My own strains of three-band and golden; "Moore's" long-tongue; Doolittle's golden; all selects. Carniolans mated to Italian drones when desired, No disease. Circular free.

MY GOLDEN ITALIAN breeding queen produces bees that do not know enough to stay in the hive when it rains. They are hustlers. Caucasians, bred from an imported Queen. Queens mated in yards 6 miles apart. Satisfaction and safe arrival guaranteed. Both queens and supplies are A No. 1. Agents for The W. T. Falconer Mfg. Co's be supplies. J. R. Rambo, Collingdale, Pa.

IF YOU WANT BEES that winter best, build up early in the spring, the best comb-honey bees, Get my Improved Carniolan Queens, They do business, [Italians for those prefering them.] Catalogue free. W. W. CRIM, Pekin, Ind. Feb8

ITALIAN AND CAUCASIAN QUEENS and bees; best stock and no disease. My circular is free, and courteous treatment is given all correspondents and patrons. Write me of your needs. A. E. Titoff, Ioamosa, California. Oct. 7

SAM'L M. ANGEL, Route 1, Evansville, Ind.—Italian Queen Breeder. I am the only breeder of Angel's Golden Beauties; also produce one of the finest strains of bright three-banders. Only tested stock sold. Orders filled in rotation and safe arrival insured. Tested queens, $1; selected tested, $2.50. Apr.8

BY RETURN MAIL or money refunded—Italian queens, each 75c.; six queens, $4; Caucasian queens, each $1; six queens $5. Warranted purely mated, D. J. Blocher, Pearl City, Ill.

The American Bee-Keeper Four Full Years for $1.00. To New Subscribers, Three Full Years for 75 Cents. Is that Cheap enough?

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WE are always in the market for extracted honey, as we sell unlimited quantities. Send us a sample and your best price delivered here. The Fred W. Muth Co., 51 Walnut St., Cincinnati, O. 6-11

Cent-a-Word Column.

DO NOT burn your refuse from Wax Extractor. Send it to me and get your cash. Archie L. Coggshall, Groton, N. Y. tf

AGENTS WANTED—To sell advertising novelties, good commission allowed. Send for catalogue and terms. American Manufacturing Concern, Falconer, N. Y.

FOR SALE—45 colonies of bees, excellent strain, no disease, several hundred hives, foundation mill, dipping tank, Cowan honey extractor and numerous other appliances. Located in Florida. Cheap for cash. Address, S. B. C. Care American Bee-Keeper, Fort Pierce, Fla.

INCREASE is a hadsome little book telling how to form new colonies without breaking working stocks. A simple, sure, satisfactory plan, 25c. Baby Nuclei tells how to mate many queens from sections with a mere handful of bees; 42 pages, 20 pictures, 50c. Cell Getting tells how to save labor in rearing queens, 50 cents. Queen rearing outfits. Golden all-over and Caucasian Queens. Circulars free. E. L. PRATT, Swarthmore, Pa.

WANTED.—No. 1 white and amber and buckwheat extracted honey in 60 lb. cans or barrels. Send sample and quote lowest price delivered in Preston. M. V. Facey, Preston, Fillmore county, Minn.

FINE CHANCE for Bee-keeper. Having retired from the bee business, I offer for sale my property at Wabasso, Fla. Lot contains 6 1-4 acres, good house, orange and other bearing fruit trees. Lot of hives, extractors and other necessary equipment. A splendid range for bees. Also one acre lot for apiary in black mangrove district, two miles distant. Write for terms, Mrs. W. L. Keefer, Fort Pierce, Fla.

YOUR NAME in Tipton's Poultry Breeders Directory will bring you big mail—sample copies of all the leading poultry and farm journals, magazines, letters, circulars, etc. Send 10c. for four months subscription to the Modern Farmer and your name will be inserted in this big directory. Mention your breed of poultry and if more than one kind send 5c. additional for each breed. Write name and address plainly. Send today, silver or stamps. Tipton Publishing Co., Hannibal, Mo., Oct. 7.

HONEY AND BEESWAX MARKETS.

(Dealers' Selling Prices.)

Toledo, Ohio, July 16—There is a good demand for new comb honey, also for good grade of extracted, and same would bring good prices. We quote our market today as follows: Comb, 15 to 16 cents. Extracted, 5 1-2 to 6 cents. Beeswax, 26 to 28 cents. The Griggs Bros. & Nichols.

Kansas City, Mo., July 17.—The honey crop in this section is short. Can use any quantity. We quote our market today as follows: Fancy white comb, per 24-Sec. Cr., $3.50 to $3.65. Extracted, 9 cents. C. C. Clemmons & Co.

Milwaukee, July 18.—There is not much doing at present in honey. The supply is not large. Demand, slow. We quote today as follows: Choice white to fancy, comb 16 to 17 cents. Extracted, 8 to 9 cents. Beeswax, 25 to 30 cents. J. Offermann & Co.

Worcester, Mass., July 18.—No honey on the market. W. H. Blodgett & Co.

Denver, July 18.—Judging from present indications, the crop of honey in this part of the state will not be heavy. The supply is very light. Demand fair. We quote our market today as follows: For strictly No. 1, new crop comb, $4.00 per 24-Sec. case. Extracted, no change from former quotations. Colorado Honey Producers' Ass'n.

Chicago, July 8.—Very little honey of the yield of 1907 has come on this market. What there has in the way of white comb has sold readily at 6 cents per pound. There is no call for other grades at the present time. Very little demand for extracted and a tendency to not take it at over 7 cents for the best grades of white. Beeswax continues to sell well at 32 cents. R. A. Burnett & Co.

Cincinnati, July 3.—The demand for extracted honey does not come up to expectations, which is probably due to the lateness of the season. Quotations range about the same as published recently. Amber in barrels at 5 1-2 cents to 6 3-4 cents per pound, according to the quality. Fancy white extracted honey in crates of 2 60-pound cans at 9 cents.

As yet, there is no new comb honey on the market. We are paying 28 cents per pound cash, and 30 cents in trade, delivered here for choice yellow beeswax free from dirt. The Fred W. Muth Co., 51 Walnut St.

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made in the last twenty years, undoubtedly he has made THE BEST ON EARTH

Smoke Engine, 4 inch stove, none too large, sent postpaid	$1.50
2 1-2-inch	.90
3 1-2-inch	1.10
2-inch	.70
3-inch	1.00
Little Wonder, 2-inch	.65
Knife	.80

T. F. BINGHAM

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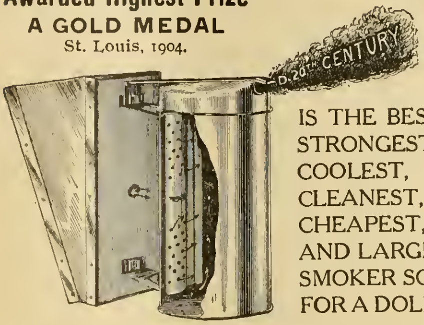
Have your name inserted in our Big Post Card Directory, which goes to thousands of persons who wish to exchange cards. Goes to all parts of the United States, Canada, Mexico, Hawaiian Islands, Philippines, Alaska, Panama, Australia and all parts of Asia and Europe. We will mail over 25,000 copies of the next issue of our directory, so send your name at once if you wish to receive hundreds of cards from all parts of the world. Send your name to-day and enclose 10 cents to pay for a year's subscription to American Stories. Address AMERICAN STORIES, H. D. POST CARD DIRECTORY DEPARTMENT, Grand Rapids, Mich. tf.

The Danzenbaker 20th Century Smoker
Pat. Oct. 3, '05, June 4, '07.

Awarded Highest Prize
A GOLD MEDAL
St. Louis, 1904.



IS THE BEST,
STRONGEST,
COOLEST,
CLEANEST,
CHEAPEST,
AND LARGEST
SMOKER SOLD
FOR A DOLLAR

It has a side grate that strengthens the fire-cup, and holds a removable metal and asbestos lining that keeps it cool, adding to its durability. It has no valves to get out of order or snout to **CLOG WITH SOOT.**

ALL THAT IS CLAIMED.—N. E. France, Platteville, Wis., General Manager of the National Bee-keepers' Association says:

I have given your 20th Century a thorough trial. For convenience in lighting, durability, and long time one filling will last and give ample smoke, I find it all you claim. In the spring I shall want several. I always want the best.

SURPASSES ALL OTHERS.—Mr. Grant Stanley, Nisbet, Pa.—"After giving the Danzenbaker 20th Century Smoker several trials, can say it surpasses all smokers it has been my liberty to try; it will not go out until the fuel is all consumed, and it produces a cool smoke, a feature very necessary in any first-class smoker."

BEST IN TWENTY YEARS.—M .D. Andes, BristolTenn.—"I have used the 20th Century Smoker one season. It has given me entire satisfaction. In my twenty years of bee-keeping I first used the old stand-by Clark smoker, and I believe I have tried all the different makes, as I am always looking for the best, and will say that your smoker beats them all up to date."

NEVER TOO HOT TO HOLD.—Dr. Reginald Munson, Washington, D. C.—"I am well pleased with the 20th Century Smoker. It keeps fire well without getting too hot to hold on continuous use and makes smoke enough to satisfy the most critical."

Price Dan-ze, Large 3½-inch Smokers:

Postpaid—one, $1.15; two, $2.10; three, $3; five, $4.50.
By Express or freight—one, $1; six, $4.20.

"Facts About Bees," a sixty-four-page pamphlet, sent free on request. Send also address of your bee-keeping friends for same.

F. DANZENBAKER, Norfolk, Va.
(Jamestown Exposition Sta. Money-orders on Norfolk.)

Our Special Premium Offer

$2.00 Gold Fountain Pen,

and the American Bee-Keeper one year for only 90c to every subscriber, old or new. The pen will be forwarded immediately upon receipt of the money. It is made of the best quality of hard rubber in four parts, and fitted with a guaranteed iridium pointed 14-k GOLD PEN. The "fountain" is throughout of the simplest construction and can not get out of order, overflow, or fail to supply ink to the nib.

"A FOUNTAIN PEN IS A NECESSITY OF THE 20TH CENTURY."

It dispenses with the inconvenient inkstand and is always ready for use.

This is an unusual opportunity to secure, at a very low price, an article of superior quality that is coming to be essential to the comfort and convenience of every one. Remember this offer is for a short time only.

The American Bee-Keeper, Falconer, New York

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Easiest to Use, Best in Results. Low in Price.

It's Easy to Make Pictures with KRUXO.

Write today for full information, to
KILBORN PHOTO PAPER CO.,
CEDAR RAPIDS, IOWA.

N. B.—The editor of The Bee-Keeper has used more than a thousand gross of Kruxo paper.

**BEES, QUEENS,
SUPPLIES**

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A New One

The Modern Farmer and Busy Bee	$ .25
Gleanings in Bee Culture	1.00
Inland Poultry Journal	.50
Kimballs' Dairy Farmer	.50
	$2.25

Our price for all of these one year only, $1.15.

Write for sample copy and other clubbing offers as good or better.

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The Miller WAX EXTRACTOR

Has revolutionized wax-handling methods. Get acquainted with the MILLER before buying.

HOMES In Old Virginia

It is gradually brought to light that the Civil war has made great changes, freed the slaves, and in consequence has made the large land owners poor and finally freed the land from the original owners who would not sell until they were compelled to do so. There are some of the finest lands in the market at very low prices, lands that produce all kinds of crops, grasses, fruits, and berries; fine for stock. You find green truck patches, such as cabbage, turnips, lettuce, kale, spinach, etc., growing all the winter. The climate is the best all the year around to be found, not too cold not too warm. Good water. Healthy. Railroads running in every direction. If you desire to know all about Virginia send 10c. for three months subscription of the VIRGINIA FARMER to Farmer Co., Box 604, Emporia, Va.

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A VEST POCKET MAP OF YOUR STATE

New issue. These maps show all the Counties, in seven colors, all railroads, postoffices—and many towns not given in the postal guide—rivers, lakes and mountains, with index and population of counties, cities and towns. Census—it gives all official returns. We will send you postpaid any state map you wish for 25 Cents (silver.)

John W. Hann

WAUNETA, NEBRASKA

DANZENBAKER PRIZES

It is to be regretted that so many bee-keepers are satisfied to produce year after year a very ordinary grade of honey as regards its appearance, when by a little more care, and having more suitable fixtures, and by taking the honey from the hive at just the right time, a much larger percentage of "fancy" or "extra fancy" honey could be produced, which would sell at a much higher price. The experience of honey-merchants generally is that there is no difficulty in disposing of large stocks of fancy or extra fancy, even when the market is dull. It is the inferior grades that suffer most at these times. We believe, too, that bee-keepers would be very much better satisfied with their season's work if their best efforts were made to produce a really fine product. To increase further the interest in extra fancy honey, the following prizes are offered for honey produced in Danzenbaker hives during the year 1907, under the following conditions:

FIRST.—As above stated the honey must be produced in a Danzenbaker hive, either the present style or any Danzenbaker hive that has been put out within the last few years. These hives may be had of any dealer in bee-keepers' supplies in any part of the country.

SECOND.—For Classes 1 and 2 we require a shipment of approximately the amount stated, to be made by the bee-keeper direct to us at Medina. After the prizes have been awarded the honey entered for competition in Class 1 or 2 will be held subject to the instructions of the producer. We will sell it at a five per cent commission or we will ship it to any point direct by freight or express. There being good honey markets in our immediate vicinity as Columbus, Cincinnati, Cleveland, Buffalo, and Pittsburg, it can be disposed of without difficulty at good market prices, and the shipper will not have to lose a good market by shipping it here. Neither the honey awarded a prize nor that which obtained no prize is to be our property, but will be sold subject to the instructions of the producer who sends it to us. We are interested only in inspecting it to award the prizes.

THIRD.—For all honey submitted for prizes we must have a definite statement from the producer regarding the conditions under which it was produced, whether a light or heavy flow of honey, how the colony was handled, how many colonies in the yard, from what source produced, etc.

FOURTH.—For Classes 3, 4, and 5, we must, in addition to the above report have the signature of two witnesses certifying to the correctness of the report. If the party who sends us the report for the competition is well known to us we shall not require these witnesses. References may be given instead of the signature of witnesses if desired. All parties intending to compete for these prizes should send for blanks which we will furnish, on which the report may be made out.

FIFTH.—It will be noticed in the last three classes, three to five inclusive, that it is not at all necessary to send us the honey—all we require is a report.

SIXTH.—We reserve the right to limit the number of awards in each class, or to make no awards in a class if there are no satisfactory entries for the same.

SEVENTH.—No contestant will be awarded more than one prize in each class, but may make two entries if desired—one in Class 1 or 2, and another in Class 3, 4, or 5.

The classifications for the prizes are as follows:

Class 1.—For best shipment of 200 lbs. of comb honey in Danzenbaker hive.
Class 2.—For best case of comb honey in Danzenbaker sections.
Class 3.—For best report of yield from single colony in Dazenbaker hive.
Class 4.—For best report of yield from five colonies in Danzenbaker hives.
Class 5.—For best report of general results from use of Danzenbaker hive.

For each class there will be ten prizes as follows:

First.—$10.00.
Second.—$7.00.
Third.—$5.00.
Fourth.—$2.00.
Fifth to Tenth.—$1.00 each.

Five Classes.
Ten Prizes for each Class.
Fifty Prizes in all.

This is the time to decide to enter this competition. No matter where you live, whether in the United States or elsewhere, you can certainly find one class in which you can make an entry; and as there are ten prizes in each class we believe that no one will be greatly disappointed in the results unless it is ourselves, and we hope that we shall not be, but see a large number of entries. Even if you fail to get a prize, you will doubtless have increased the value of your own product by your efforts to produce some big results or an extra quality of honey.

The A. I. ROOT CO., Medina, Ohio

The American Bee-Keeper

SEPTEMBER
1907

Fort Pierce, Fla., – Falconer, N.Y.

BEE HIVES SECTIONS

EVERYTHING

That is used by bee-keepers can be procured of us as cheaply as anywhere, and we know OUR GOODS ARE SUPERIOR, both in material and workmanship, to those of any competitor. ONE TRIAL WILL CONVINCE YOU. That's all we ask. You will never buy of anyone else.

Our new illustrated catalogue and price list is now ready. Send for one on a postal card.

The Fred W. Muth Co., 51 Walnut Street, Cincinnati, Ohio, handle our line of goods.

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W. T. Falconer Manfg. Co.

JAMESTOWN, NEW YORK

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OF

BEE SUPPLIES

OUR GOODS ARE SUPERIOR IN QUALITY
THE PRICES ARE REASONABLY LOW

Everything we make is practical. We have been making Beekeepers' Supplies for over 25 years, and if EXPERIENCE and responsibility count for anything, WE OUGHT TO HAVE YOUR TRADE.

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Following are a few of those who handle our goods in large quantities, and can supply you at factory prices :

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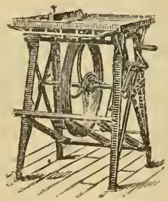

Foot Power Machinery.

This cut represents our Combined Machine, which is the best machine made for use in the construction of Hives, Sections, Boxes, etc. Sent on trial. Send for Catalogue and Price List.

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THE

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Established in 1861

It is the only Weekly Bee Paper in America. Those who write for it are among the most extensive and successful bee-keepers in the World. Many of them produce honey by the ton, and make money at the business, hence their experience is valuable.

Among the Departments represented in the Bee Journal are these: Editorial Notes and Comments, Miscellaneous News Items, Contributed Special Articles, Opinions of Some Experts, Proceedings of Conventions, Our Bee-Keeping Sisters, Mr. Hasty's After-thoughts, Dr. Miller's Answers to Questions, Honey and beeswax Market Quotations.

Every Bee-Keeper, whether having one colony or 100, should read the old American Bee Journal every week.

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The best Home and Fashion Magazine
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It contains over 100 pages each month of Current Fashions, Economy Articles, Household Advice, Dressmaking and Millinery, Short Stories, etc., beautifully illustrated with half-tone and color plates.

By special arrangement with the publishers we make the following exceptional offer:

American Bee-Keeper	regular price	**50c**
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Both, one year, for		**65c**

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THE AMERICAN BEE-KEEPER

FALCONER, NEW YORK

National Bee-Keepers' Assoc'n.

The largest bee-keepers' society in the world. Organized to protect and promote the interests of its members.

Membership Fee, $1 a Year.

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No farmer should think of buying land before seeing a copy ow The Farm and Real Estate Journal. It contains the largest list of lands for sale of any paper published in Iowa. It reaches 30,000 readers each issue, and is one of the best advertising mediums to reach the farmers and the homeseeker that you can advertise in . For 75c we wi mail you the Journal for 1 year, or for 10c in silver or stamps we will send the Journal 2 months on trial. **Address.**

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Advertise your Propositions, classified, one cent a word or display $1.00 per inch each insertion.

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Complete Wardrobe Outfits	**$5 to $50**
Long Dresses	**24c to $2.75**
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—Thin Flat Bottomed Foundation
—Has no Fishbone in Surplus Honey

Being the cleanest, is usually worked the quickest of any foundation made The talk about wiring frames seems absurd. We furnish a Wired Foundation that is BETTER, CHEAPER and not half the trouble to use that it is to wire brood frames.

Circulars and samples free.

J. A. VAN DEUZEN
Sole Manufacturer
Montgomery Co. Canajoharie, N. Y.

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NOTE THE ADDRESS
PENDER BROS.
West Maitland,
N. S. W., Australia.

The largest manufacturers of Bee-keepers' Supplies in the Southern Hemisphere, and publishers of the Australasian Beekeeper, the leading bee journal south of the equator. Sample copy and 64-page catalogue FREE. 6tf

The American Bee-Keeper

Is supplied to members of Bee-Keepers' Associations, in Clubs, at Twenty-five (25) Cents a Year

Our Special Premium Offer

$2.00 Gold Fountain Pen,

and the American Bee-Keeper one year for only 90c to every subscriber, old or new. The pen will be forwarded immediately upon receipt of the money. It is made of the best quality of hard rubber in four parts, and fitted with a guaranteed iridium pointed 14-k GOLD PEN. The "fountain" is throughout of the simplest construction and can not get out of order, overflow, or fail to supply ink to the nib.

"A FOUNTAIN PEN IS A NECESSITY OF THE 20TH CENTURY."

It dispenses with the inconvenient inkstand and is always ready for use.

This is an unusual opportunity to secure, at a very low price, an article of superior quality that is coming to be essential to the comfort and convenience of every one. Remember this offer is for a short time **only.**

The American Bee-Keeper, Falconer, New York

TWO YEARS FOR $1.00

After a man succeeds in publishing a good journal, the next step is that of getting it into the hands of the people, of getting them to reading it, and becoming acquainted with its merits. This can be done by advertising, sending out sample copies, circulars, etc. All this costs money. I think I am safe in saying that, for every new subscriber I have received, I have paid $2.00 in advertising; hence, I have always said that a publisher of a good journal could afford to send his paper one year free for the sake of getting it into new hands. It would cost no more than other forms of advertising, and would be more effective; but, for obvious reasons, this plan could not be put into practice; but I am going to come as near to it as I can. I have between 200 and 300 complete sets of back numbers for the present year; and as long as the supply holds out I will send a complete set, and the rest of this year free, to any one who will send me $1.00 for the Review for 1907.

Back numbers of the Review are different from those of newspapers and some journals. The information that they contain is just as valuable now as when first published. In an advertisement like this it is imposisble to give much description, but I will mention one or two features of each issue of

THE REVIEW FOR 1906

JANUARY.—The keynote of the Review for 1906 is "The Control of Increase;" and Mr. Gill, of Colorado, starts off by telling how he completely and profitably controls the increase of 1000 colonies run for comb honey.

FEBRUARY.—R. C. Aikin shows how, with a knowledge of principles, increase can be controlled; but perhaps the most valuable contribution to this issue is from R. F. Holterman, of Canada, describing "Some Short Cuts in the Production of Extracted Honey.

MARCH.—In this issue is illustrated and described the only really successful non-swarming hive that has yet been invented. Its inventor, Mr. L. A. Aspinwall, secured an average of 140 pounds of comb honey the past season from fifty colonies, and had no swarms.

APRIL.—The most valuable article in this issue is from C. A. Olmstead, of New York, in which he illustrates and describes a method of foretelling swarming without opening the hive.

MAY.—In this issue is begun a series of the most delightfully and beautifully illustrated sketches that have ever appeared in the Review—that of the editor's experience in locating and managing three out-apiaries in the wild, picturesque, raspberry region of Northern Michigan.

JUNE.—The article this month on "Control of Increase," is by that veteran, J. E. Crane, of Vermont, and shows how to do the work when the harvest comes early. This issue also gives the editor's experience in moving his 400 colonies into Northern Michigan—illustrated with four engravings.

JULY.—This issue has a beautiful full-page illustration of the Review apiary here at Flint (105 colonies), and the editor gives a resume of his work in this apiary for the first six months of the year—showing where he failed and why he succeeded.

AUGUST.—In this number the editor tells of "Reaping the Harvest in Northern Michigan," and gives pictures of the different apiaries, some at old abandoned lumber-camps, one with a tent for a honey-house, while the reading-matter has an actual flavor of the wild northern woods.

SEPTEMBER.—Of all the articles in this year's Review I doubt if any one is more really helpful than the one in this issue by the editor, entitled "Conveniences in the production of Extracted Honey." It has several illustrations, and shows how to use bee-escapes without the back-aching work of lifting the hives by hand; how to make a honey-knife cut as "slick as a razor;" how to make an uncapping-can for ten cents; how to arrange a cheap automatic strainer, and run the honey directly into the cans; and how to arrange an electric bell, at a cost of 60 cts., that will ring when the can is full.

Instead of mentioning some of the special features for October, November, and December, let me use the space to say that one of the good things that will appear in the Review for 1907 will be a series of articles from E. D. Townsend, Michigan's foremost bee-keeper. All of his writings in the past have been fragmentary, a glimpse here and there, and they have been scattered here and there in different journals. Now he is going to write in a consecutive manner, starting at the beginning of the season and going through the year—just as though he were writing a book. It will give his system of management.

ADVANCED BEE CULTURE

This is a book of 230 pages, beautifully printed, bound, and illustrated, that discusses bee-keeping from a money point of view—shows how to make a pleasant and profitable business out of bee-keeping. Price $1.20; or, the Review for 1907 (and all the back numcers of this year free) for only $2.00.

W. Z. HUTCHINSON, Flint, Mich.

WE WANT YOUR COMB-HONEY.

When you ship to us, you ship to the biggest exclusive honey dealers in business today.

Don't Take Our Word for It

We buy in unlimited quantities, have an unlimited outlet for the goods.

ASK THE EDITOR

We **REMIT TO YOU** the **DAY SHIPMENT ARRIVES**

JUST WRITE US HOW MUCH YOU HAVE TO SELL, YOUR PRICE DELIVERED IN CINCINNATI, AND HOW THE HONEY IS PACKED.

COMB-HONEY TO US, MEANS BIG MONEY TO YOU.

THE FRED W. MUTH COMPANY, 51 Walnut St., Cincinnati, O.

"THE BUSY BEE MEN."

H. H. Jepson,

182 Friend St., BOSTON

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WANTED

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AMERICAN BEE-KEEPER

Falconer, N. Y.

NOT IN THE TRUST OR UNION

Best 8 frame 1 1-2 story Dovetail Hives	$1.25
Best 10 frame 1 1-2 story Dovetail Hives	1.40
Sections—No. 1 Beeway	3.75
Sections—No. 2 Beeway	3.25

Special prices to small dealers. Large warehouse, big stock, only best goods handled. Send for 32 page catalog free.

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BINGHAM

HAS MADE ALL THE IMPROVEMENTS IN

Bee Smokers and Honey Knives

made in the last twenty years, undoubtedly he has made THE BEST ON EARTH

Smoke Engine, 4 inch stove, none too large, sent postpaid	$1.50
2 1-2-inch	.90
3 1-2-inch	1.10
2-inch	.70
3-inch	1.00
Little Wonder, 2-inch	.65
Knife	.80

T. F. BINGHAM

FAREWELL, MICH.

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THE AMERICAN BEE-KEEPER

Entered at the Postoffice, Fort Pierce, Fla., as second-class mail matter.

Vol. XVII. SEPTEMBER, 1907. No. 9.

SCHEDULE OF THE BEE SHOW OF THE WORCESTER COUNTY BEE KEEPERS' ASSOCIATION.

To be Held in Horticultural Hall, Worcester, Mass., Sept. 13 and 14, 1907. Conditions of Exhibition.

1. The exhibition is strictly free to all. There are no entry fees. There are no charges for space. The exhibition is free to the public.

2. The purpose of the exhibition is three fold: To bring together for display and competition the products of bee keepers. To bring together for competition and display the products of manufacturers, publishers, and tradesmen. To educate the public.

3. A first, second, and third prize, (consisting of a ribbon) will be granted in each scheduled exhibition. An award of merit will be granted all worthy displays by manufacturers, tradesmen and others whose exhibit is not provided for by numbers 1 to 15 of the schedule.

4. The Hall is central, large, well lighted, and fully equipped with tables, covers, dishes, elevator, etc. For special conveniences, communicate with the Secretary, or Mr. A. A. Hixon, Horticultural Hall, Worcester Mass. Exhibits may be sent so as to reach the hall anytime the week of Sept. the 5th, and will be taken care of till the exhibition.

Honey. In numbers 1 to 5, there will be two classes; one for those living in Massachusetts, and one for those outside of Massachusetts.

1. For the best five pounds of comb honey in section boxes.

2. For the best crate of comb honey packed for market. Neatness of package will be considered.

3. For the best two frames of comb honey for extracting. Weight, color, quality, as fell as general appearance will govern.

4. For the best display of chunk honey.

5. For the best display of comb honey in general. This is open to the taste of the exhibitor.

6. Extracted or strained honey. For the best five pounds of extracted honey in glass. Color, quality, and general neatness will govern.

7. For the most attractive display of extracted honey.

8. Vinegar. For the best display of vinegar made from honey. Sharpness and clearness will govern.

9. Beeswax. For the best pound of beeswax. Softness and color will govern.

10. For the best display of beeswax.

Bees. All bees must have been raised by the exhibitor. Nos. 11 to

15 are to appear in single frame nucleus. Each nucleus must contain a queen. Nos. 15 to 17 may be shown as exhibitor desires.

11. For the best Italians.

12. For the best black or German bees.

13. For the best Carniolan bees.

14. Varieties not scheduled.

15. For the best display of bees.

16. For the best display of queen bees ready for shipment.

17. For the best display of a queen rearing outfit, showing cells in different stages of development.

18. General Display. For the best display of bees, honey, wax, bee furniture, etc. Exhibitor given full freedom. Products and bees must be of his own raising. Please write to Secretary that space may be reserved.

19. Cookery. For the best cake made with honey. Recipe attached.

20. For the best cookies made with honey.

21. For the best display of cake, cookies, and confectionery made with honey.

22. Photography. Photograph of a swarm of bees.

23. Best photograph of a New England apiary.

Displays not scheduled above are solicited. Meritorious exhibits will be awarded a diploma. Manufacturers, tradesmen, and publishers are urged to make a display. Free space will be awarded each applicant. Points of merit are neatness, perfection of workmanship, as well as instructiveness and general effectiveness of display.

Communications may be addressed either to the secretary or to A. A. Hixon, Horticultural Hall, Worcester, Mass.

There will be lectures by people prominent in the bee world both days of the fair.

Very truly yours,
A. H. Estabrook, Sec'y.
Clark University, Worcester, Mass.

SAYS HE WANTS TO KNOW.

Dear Mr. Editors:

I want to know if you know as much as the editors of the other papers? I want to know if as much of it is not so? I want to know why if some of the sorts of hives are so much better than others they have to be advertised so hard? I want to know what happened to the Caucassian boom? I want to know why it is Banats now? I want to know why if the bees built the comb against the glass as stated in Gleanings August 1st, that they left so many big pieces of broken cell walls lying about? I want to know if Dayton puts those corkscrew tins in his hives with the breakfast food on them? I want to know if those bees in the Cincinnati church work on Sundays? I want to know if the Kalifornia Kinklet takes fresh or used tooth picks to fasten the combs in with? I want to know if uses them over again? I want to know if he uses a one legged or a three legged stool to milk his bees with? I want to know if he wears it behind hitched to his belt with the leg sticking down like a tail? If so I want to know what he does when his best girl goes by? I want to know if the size of the cell determines the kind of egg the queen puts in it and if so what would happen if she laid in a bushel basket? Would the bee from it work on catnip, turnip or seaweed? I want to know if a Roc's egg sawed across would not make good cell cups? I want to know if queens reared in them would have umbilical cords? I want to know if the benevolent supply men would supply us with Roc's egg cell cups for a modest consideration, just to accommodate us? I want to know if queens from such cell cups would call for new sorts of hives? I want to know if we would have to have a new sort of flowers (seed for sale cheap to your readers) for them to work on? If we had to have new hive I want to know if we would have to use an enlarged hand stump puller to lift them with? If we had such hives I want to know if the lady bee keepers would have to take a course of lessons in Amazonian development? (by mail cheap.) If so I want to know if the men would retain even their imagined supremacy?

There is a lot more I want to know but I want these answered first. Please oblige a constant reader, and say my old brindle cow, the one that kicked you when you were here, has got twin calves and I planted the pure coffy berries you sent me and they came up chicory and I want to know why these things are so. P. S. Reply soon because I want to know.

Yours truly,
Simon Simple.

AN OPEN LETTER TO DR. MILLER.

Providence, R. I., July 15, 1907.

Well, Dr. Miller: I am delighted to have an opportunity to again lock horns with you. Because at times bees leave drone cells empty even when they are crowded for storage space, it does not follow that they know they need drones. Physical conditions within the bees, produced perhaps by heat, crowding, surfeit of honey in the sacs, excess of chyle in the stomachs or some other obscure cause or causes may serve to make the bees leave such cells vacant. Such cells to bees in such conditions may produce a revulsion of feeling comparable to that in the sea-sick traveller at the smell of fried pork. Who knows?

That bees notify the queen of the fact that there are vacant drone cells or direct or guide her to them, to me seems too absurd for serious consideration. Doctor, if you will construct a really scientific observation hive and will watch the bees in it at all hours of day and night and under all sorts of conditions, I think that you will be forced to concede that bees are precious little more than reflex machines. Most observation hives will only show you a meagre part of what goes on among the bees. And by-the-bye I note that you recently said in the "Journal" that bees object to the light and will eventually cover the glass with propolis. There you are in error. If the hive is not subjected to the sun's rays, or the rays from a bright flame they will work on apparently quite unconscious of whether they are in the light or in the dark. They do get excited when there is a sudden influx of light, but if the light is continuous they show no evidence of being conscious of it.

With a proper hive you will also be able to see how little work a bee does in twenty-four hours. Because they hustle while at work does not necessarily make them "busy bees improving each shining hour." Mr. Latham took me to task for calling the bees "lazy," but at the same time he confessed that they were often "idle." Idleness when there is work to do and when waste ensues from its not being done is generally called laziness in the idle person. However, the quibble should not be over terms. As the individual bee does so little each day it behooves the bee-keeper to see that there are an abundance of workers in each colony when the harvest is to be gathered.

Sincerely yours,
Arthur C. Miller.

IT MEANS WORK.

Chatsworth, Cal., Aug. 1,, 1907.

The harvest set in on May 8th and ended June 28th, during which time I extracted 36,000 pounds from 306 prime colonies. There were four rounds made averaging about 30 pounds to the colony. That is just about 1-3 or 1-2 an ordinary yield. As I had no assistance I had to "hump" to provide room for a few days. Once they filled and sealed the supers in four days of the cloudiest kind of weather. On the 11, 12 and 13th of June I took out of the hives, uncapped and extracted, over 2,000 pounds each day. There were 350 swarms which were all sent back. I was so tired many times that I was glad to crawl into bed with overalls, boots and all, and daubed with honey from head to feet.

C. W. Dayton.

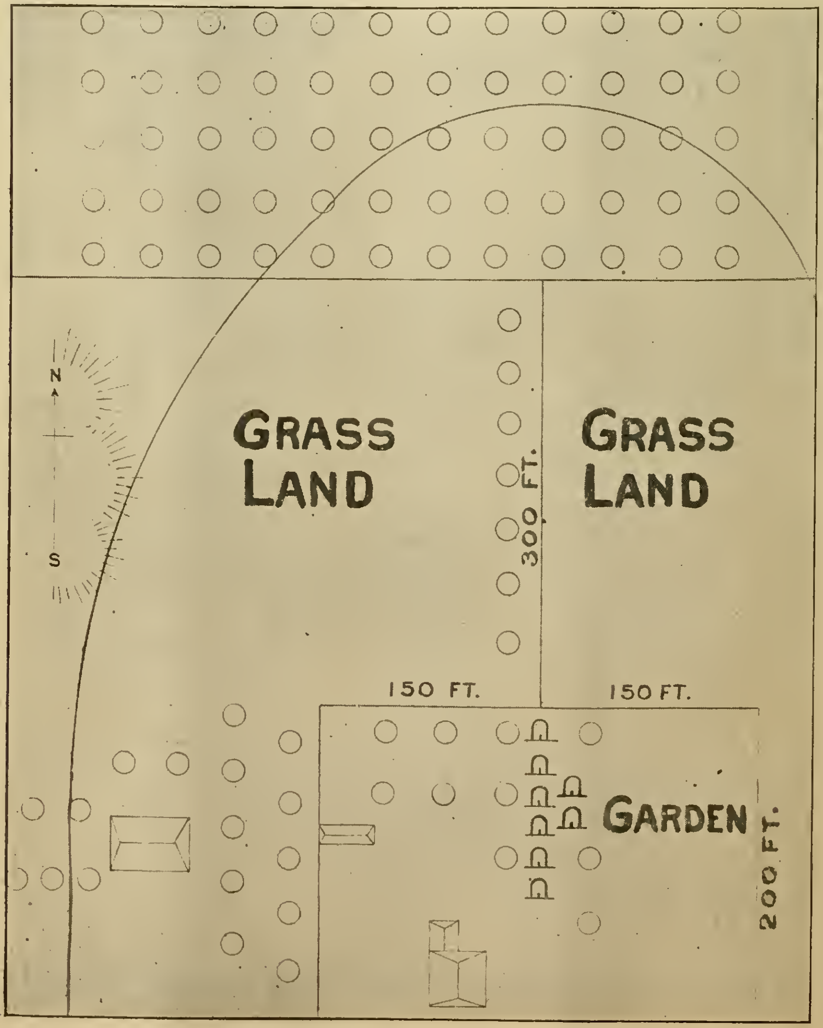
It has also been observed by the Switzer bee-keepers, according to the Swtz. Bztg. that during the dry spring of 1906 the pear bloom yielded nectar in an unusual degree, and while dandelion suffered from drouth, the deep-reaching pear tree roots supplied the tree with the needed moisture, and the warm weather was extremely favorable for the pear blossoms to secrete nectar.

The Switzer bee-keepers realize that bees ought to be gotten ready for winter early. Uniting, requeening and feeding up late, are not conducive to good wintering.

BEES AND HORTICULTURE.

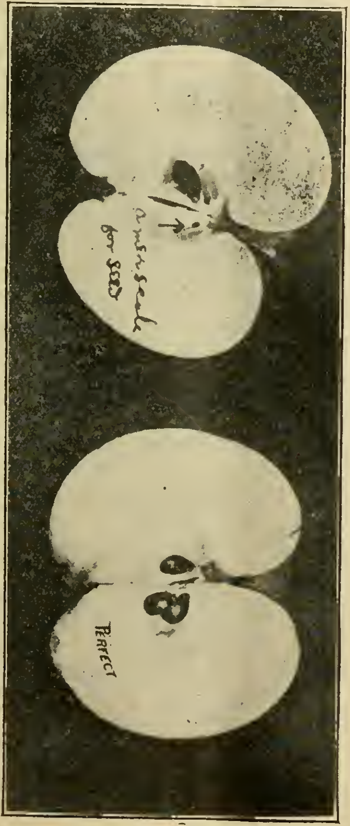
A. C. MILLER.

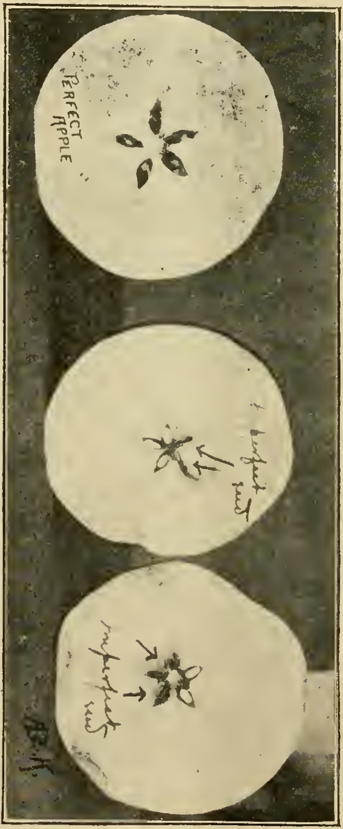
THE DEPENDENCE of the horticulturists upon the bees for full and perfect crops of fruit is only slightly realized. Specialists, to be sure, generally know that without the presence of bees they are often much handicapped but how much even they have but a meagre idea. Blossoms of some varieties of fruit are sterile to pollen of the same variety notably so with the Bartlett pear I believe. Other plants have the fruit


N
S
GRASS LAND
300 FT.
GRASS LAND
150 FT.
150 FT.
GARDEN
200 FT.

bearing and the pollen bearing blossoms separate and the fertilization of the bloom is largely or quite dependent on the visits of insects.

Left to herself Nature has a way of equalizing matters and having sufficient laborers for the work to be performed, but man by his meddling disturbs the balance and must perforce make special effort to remedy the troubles he has created. Nature is content with scattered fruit trees while man must mass them by the hundreds or thousands so that unless he supplies bees there are not enough insects to pollenate the myriads of blossoms. In the early springtime, when so many fruit trees bloom, showers and storms are frequent and often prove a serious hindrance to pollenation either by wind or insects.





Some years ago the writer had a splendid illustration of the value of bees in an orchard and herewith is presented a diagram showing the relative location of bees and trees and the range of flight of the bees. The season was one of frequent and heavy showers. Temperature was favorable most of the time and the bloom was heavy but the frequent and sudden showers kept the bees from ranging far and also prevented much pollenation by the winds. The straight lines of the diagram show the fences and distances are in figures, the trees are indicated by circles, and the hives are the other little designs. The curved line shows approximately the limit of the bees' flight. Within that line the set of fruit was good, heavy near the hives, lighter as the line is approached, while beyond it it rapidly dwindled from tree to tree until at a distance of two or three trees fruit was scarcely to be seen. The orchard to the North was a large one and the line of the bees' working limit was very pronounced. A small orchard a thousand feet to the east set practically no fruit and the same was true of many other small orchards observed. The limit of the bees' work was noted at the time the trees were in bloom and the set of the fruit clearly showed the efficiency of their labors.

But the set of fruit is only a part of the good the bees do. Through the courtesy of Mr. Burton N. Gates of Worcester, we are enabled to show pictures of two apples, one perfect the other imperfect. It will be noticd that the latter has imperfect seed on the poorly developed side. The blossom was imperfectly fertilized hence the defective fruit. The two apples were types of two lots from different orchardists. Both were up to date in pruning, spraying, cultivating, etc., but the man producing the perfect apples kept bees in his orchard, while no bees were kept within two miles of the orchard of the other man. The lesson is obvious.

Providence, R. I.

BEE-KEEPING AS A .SPECIALTY.

C. W. DAYTON.

THE REPORTS we see in the bee-papers for this year and last do not point very favorably toward giving up every other line of dependence and embarking in the sole business of bee culture. While a bird in the hand may be worth several in the bush there is a possibility of no bird in the bush, sometimes.

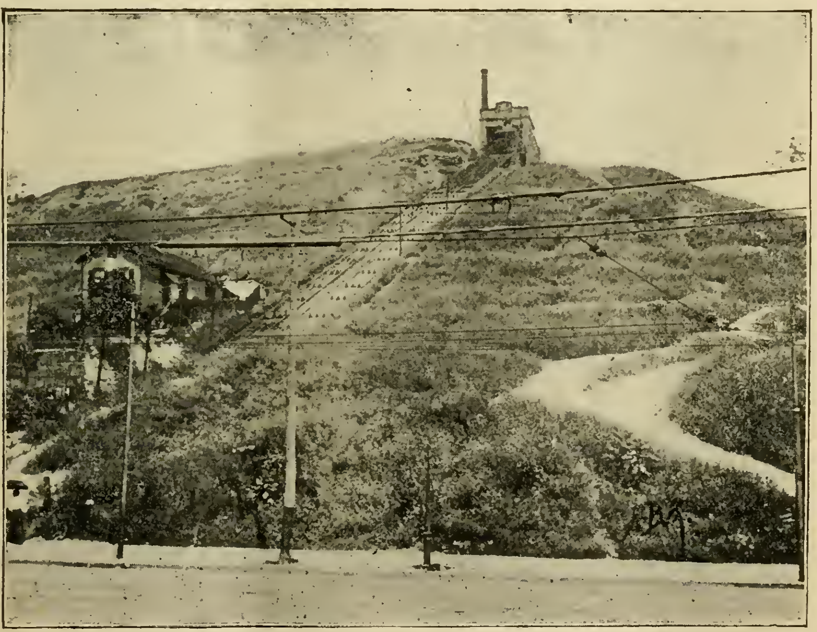
It begins to look like the successful man is the man who is prepared to grasp opportunities, whatever they may be. If we reside in a locality where we can make a living, or a part of a living, by some side issue because the locality is naturally suited to the side issue then I should not neglect the side issue merely to be a specialist in some other direction. We usually find that those who are the most successful in a specialty are allowing their specialty to ride smoothly by the support of numerous other side helps. Indeed, we may discover that their specializing consists in a combination of several kinds of helps.

The farther we go toward specialty the less net profit we will obtain on our honey because our profits must be paid out again for necessaries we are obliged to purchase of others, and who are going to charge us a high retail price—two or three times the first cost of production. In order to meet this high cost of living, or other expenses, a specialist must produce two or three times as abundantly as the opportunist and the opportunist is liable to be the most expert of the two operators. The specialist's location, or other means of production must be two or three times as good as the ordinary; but, to expect or hope to find such a condition is comparable to thrusting a boat out into a broad stream with the expectation that the current will carry your boat more swiftly than other boats are carried. If there is a part that is more rapid than the general current all the boats would be steering into it, and the same method applies in bee-keeping. If we find a good spot in which to specialize it will not be long until there will be plenty of company traveling the same road and it will be traveled until there are profits for none—like a band of robber bees continue to nose around for hours from the memory of where the bait of honey once was.

I am not averse to specializing, except in instances where there is not a reasonable opportunity. We discover opportunities by study and observation, in fact, through proper judgment, and this judgment is made posssible through experience. We can neither buy nor borrow experience or work up enthusiasm or determinations to a sufficient height to compensate for the lack of it. We should not specialize merely for the name, honor or position it may seem to give. Beware of this as a snare to your feet. If such ideas get into the head they will occupy the place of the real necessary things which ought to be there. No single vocation is broad enough to afford any mind the breadth of action that will be required. Sooner or later we find ourselves tiring of sameness and we drift out in quest of recreative activity. It should require strong incentives to cause us to relinquish all the old successful lines to take up the untried and uncertain new lines, yet it is often done.

Nor is it advisable to go into any business deeply because some one else advises that way. It is often the case that persons think themselves cut out as especial teachers and they fall into giving peculiar advice because they have not practiced themselves enough to know what the best advice is. There is a great deal of advice given which the givers themselves would not follow. Advice giving has become an occupation and is as liable to be "worked" to excess as other profit rendering schemes. We should remember, yes, remember with a vengeance that if we borrow or invest our means and fail it may send us to the bottom where it will be a slow and difficult matter to rise again. We may compare it to allowing an old horse to get down poor and hidebound. It will take nearly a whole summer of green grass to get him in respectable order again.

We read of many instances of bees being scant in stores and in Southern California this year there were nearly whole apiaries starved just before the honey harvest arrived. Quite all of this scantiness to which the bees are subjected is caused by a desire to amass wealth or pattern after others. There are more than thirteen ways to improve such apiary management. Many times the stores the bees should have retained in the hives were taken out and exchangd for articles which stand idle most all the year; such as fine vehicles, silk dresses, hardwood houses, mahogany furnishings, gold and silver trinkets, etc., and which are largely for outward show. These things have not the tendency to home



Hill Overgrown With Sweet Clover, Situated Opposite the Home of Mr. Fred W. Muth, at Cincinnati, O.

comfort and attraction as do home sports, music, pets, flowers and fruits but cost far more. Vanity is always greedy and never satisfies those who become slaves to it. Being artificial it must be obtained at a cost; a cost which is always just a little greater than can well be afforded, causing a scrimping of home affairs, and starving bees is only one of its foot-prints.

I once knew of about twenty-five farmers who settled on a tract of new land in Iowa, in 1870, and went pell mell into wheat growing as a specialty. I was ten years old. I was herding cattle on adjoining prairie and read in a scrap of newspaper that land would "wear out" and become sterile by continuous cropping. One day as one of these farmers stopped to rest his plow team I galloped my horse over to where he was and asked if he was not afraid the land would sometime fail to grow wheat. "No," he said, "never". But in a few years their wheat crops began to fail to materialize and they borrowed money to buy more seed and pay for machinery, and bear living expenses until their property and land was totally overwhelmed with mortgages and they were all compelled to move. Four or five farmers, who came into the locality after the wheat land had been taken by others, settled down on the river flat where they were obliged to clear off brush and stones in order to raise small patches of corn, oats and grass and sell eggs, butter, hogs and occasionaly a fat steer. These farmers are there still and by constant, slow accumulation are now wealthy.

There were several older men in the neighborhood who had been sturdy farmers "down east," (New York, Mass. etc.), but they were considered as of the old fogy class, so their advice was unsought and unheeded when proffered. If they all had been "old fogies" their wheat growing might have told a different story because they would have taken time and care to keep the land in proper order though their wheat crops might not have figured so many bushels.

Now while bee keeping is not farming the general principles are much alike. Most failures in bee keeping are caused through neglect to enrich the colonies of bees, by providing more and better stores, by rearing better queens, by obtaining better stock, giving better protection in winter or by adopting some side line which will lift a part of the burden of expenses from the apiary which means—give the bees a better chance.

While the yellow bees are denounced because of poorer wintering and putting yellow cappings on their honey I find them better to lay up a store or honey when honey is hard to get. Often they fill the super and pack the brood nest while the darker stripes hardly make a living. They breed less in times of scarcity and build up quicker in times of plenty, especially from small beginnings. And they fly much farther for honey. Their greater energy may be the cause of their poorer wintering—more worry—greater wear to their bodies than would be the case with a less active strain of bees. Perfect wintering conditions should make all bees alike on that score. While their cappings are not so white as some others their honey in liquid form is lighter in color and somewhat better flavor and the question comes up here whether it is preferable to work for quantity or fancy appearance of the produce. In my opinion fanciness is merely a "label" to attract the eye but to the person who wants honey to eat and has eaten enough of it to regard it properly its delicate appearance is something he will decline to pay for. It would be ten times better to put a label on teaching the use and healthfulness of honey than one whose drawing force is curiosity exerted but once or twice in a year. We have been passing through two decades in which consumers have been consuming the "rot" which the eyes sought out but we are merging into an age when the stomachs are beginning to assert their rights to decide. We should favor the consumer who is inclined to make honey an everyday article of food because of its dietetic advantages, the same as bee keepers should be of that thorough and constant kind. It may seem like casting bread upon the water at first, but it will surely return after many days.

To those who enter the vocation as a snap game and crowd their neighbors with an unreasonable number of colonies which consume the forage to no benefit to anyone, or run their affairs in a manner where they and their bees are pinched all the time and "close out" at a ruinous price at last there should be small encouragements held out. The larger share of our skill is of the unseen, unrealizable order which, from mutual contact with the simple affairs of life constitute a degree of second nature. What the unskilled do for bees must be thought out on the strength of memory of books or other instruction. The bee keeper should do for the bees because it is a part of his inside life—the activity of sympathetic nerves—that disturbs one's repose. It should enable us to think and act from the standpoint of the bees and not our own. By this plan we lend to the bees our intelligence, yet we ourselves obtain all our intelligence from the study of the simplest laws in nature. We gather and store the knowledge and deal it out again in a different form or quantity.

Chatsworth, California.

BREEDING BEES.

GEO. B. HOWE.

THERE IS NOTHING in the bee business that has been neglected as much as breeding bees for honey. They have bred the golden-all-over. Italians. Now what is there to hinder breeding them all over black with the same characteristics?

When it comes to comb honey, the yellow bees, as a rule, are such poor cappers, while her darker sisters are equal or nearly so, to the black or German bee. When any one claims that their Italians, or any other race of bees, cap their honey whiter than the blacks, I wonder if they really know what black bees are. I have produced tons of honey with black bees, and cannot ask for, or expect, my Italians to excel them as to capping their honey.

By careful breeding and selecting for eleven years, I find that I have a strain of Italians nearly equal to the blacks for white cappings of their honey. What we have got to have to breed from is a thoroughbred. I find that breeding from a hybrid is unreliable and unsatisfactory. Some of our best bee men seem to carry the idea that with a good queen we need not worry about the drone part. I find this is a mistake. With the most careful selecting and testing, I do not know which is the most important. Would you expect to get a fast colt by crossing a race horse with a draft horse? Or, would you get a non-setting strain of fowl by crossing a leghorn with a brahma? My experience teaches me that it is just as essential that we look after the drone as the queen if we expect to succeed.

Do you not think we get better drones if we raise less by using worker comb and restricting them as to drone comb? The bees certainly feed them much better than when they have an abundance of drone brood. The same is true in raising queens. Do not make a colony raise more than two good batches of cells. One batch would be better if you want good perfect queens. You will find that to raise good queens, you cannot transfer half-starved larvae and get good results. What we do want is queens from the egg and the colony that is to raise them to be in the condition of a colony that swarms as near as you can get it without unsealed brood, only what you give for queens. I would let them go without larvae from four to six hours. Now if you must transfer the larvae, put a clean comb in the center of the brood nest of your breeding colony and get all the eggs you want. Now take this comb out and put it in the center of the colony prepared. There is no guess work then about the age of your larvae. You know just how old they are and they will be floating in food and not stuck to the bottom of the cells. We should be very careful not to expose the larvae to the cold air. After transferring give cells back to prepared colony.

I have inbred for over seven years, and can see no bad results. Dr. Phillips told me two years ago to keep at it, and I will as long as I am improving. Now I am not a queen breeder, but a honey producer and what I am after is the bees that will produce the most fancy comb honey.

We may have a queen that produces more honey than any queen in the apiary and yet not be a breeder, as the queens raised from her might not be as good as she was. What we want is to test our queens as breeders to see if they reproduce themselves. When we get such a queen we have got a prize.

Black River, N. Y.

UNITED STATES DEPARTMENT OF AGRICULTURE.

Bureau of Entomology,
Washington, D. C., Aug. 3, 1907.

Dear Mr. Hill:

I take pleasure in sending with this letter a copy of Circular 94, entitled "The Cause of American Foul Brood" by Dr. G. F. White, of this office. This circular is a preliminary notice of some work which Dr. White has done and will be followed by a larger publication. Any of your readers desiring a copy of this circular may obtain it by addressing Chief of Bureau of Entomology, Washington, D. C.

Yours very truly,
E. F. Phillips,
In Charge of Apiculture.

The circular which is brief, is given in full as follows:

UNITED STATES DEPARTMENT OF AGRICULTURE,

Bureau of Entomology.
L. O. Howard, Entomologist and Chief of Bureau.

The Cause of American Foul Brood.*

BY G. F. WHITE, PHD.,

Expert in Bacteriology.

For several reasons much confusion exists as to the present status of our knowledge of bee diseases. It is hoped that this circular will give information which will to some extent clear up the subject of American foul brood from a bacteriological point of view. The symptoms of this disease are given in Circular No. 79 of the Bureau of Entomology, entitled "The Brood Diseases of Bees." American foul brood is the prevalent disease in America, and, judging from reports received from Europe and from descriptions in European bee journals and books, it is the prevalent one there. There is another diseased condition, which Cheyne examined, and to which we now refer as European foul brood.

When the author began his work on bee diseases in the summer of 1902 he observed,in combs containing American foul brood, in the dried remains of the dead larvae, known as the scales, a very large number of spores which failed to grow when inoculated into the media ordinarily used in the laboratory. It was clear, then, that these spores are not Bacillus alvei and that this disease is not the "foul brood" of Cheshire and Cheyne. The following year the study was continued and a medium was devised in which the spores found in this disease will germinate. This medium consists of an agar made by following the directions ordinarily used in the laboratory, with the exception that bee larvae are substituted for meat. By the use of this medium were obtained pure cultures of the microorganism which is found so abundantly, in the form of spores, in the dried scales of American foul brood.

In reporting these findings the author referred to this organism as "Bacillus X." Further study was subsequently made, and the species was given the permanent name, Bacillus larvae. The description of this species may be found in Technical Series No. 14 of this Bureau. In his publications the author has made no claim that Bacillus larvae is the cause of American foul brood, but has made the statement that it is found to be present in all the samples of this disease which have been examined by him. No inoculation experiments were made, for the reason that sufficient cultures in suitable condition could not be obtained from any medium then known.

Since the media used in former investigations are not suitable for obtaining cultures for purposes of inoculation, in taking up the further study it has been necessary to devise a medium which would be satisfactory in this respect. Such a medium has been discovered, and large amounts of the culture suitable for experimental inoculations have been obtained. This medium is prepared and used as follows: Healthy bee larvae or young pupae are picked from the comb, crushed, strained through cheese cloth, diluted with 20 to 50 times their volume of water, filtered through ordinary filter paper, and then passed through an earthenware filter (the Berkefeld filter is satisfactory) to remove any bacteria which are present. The sterile filtrate thus obtained may be pipetted into tubes or flasks and stored until needed. When Bacillus larvae is to be isolated, a tube of the ordinary agar of the laboratory is liquefied and cooled to 45 degrees or 50 degrees C. Then about 2 c.c of the filtrate mentioned above is added to it. A very small amount of the decaying larvae affected with American foul brood is then added. The procedure from this point is as usual in making agar plate cultures; these plates are afterward incubated. When a large amount of culture is desired for experimental purposes it is convenient to use the ordinary agar medium in large test tubes to which has been added, as above, about 2 c.c. of the sterile larvae filtrate. These agar tubes are then inclined and the surface of the congealed agar is inoculated. In no case should the larvae or filtrate reach a high temperature. The object, of course, is to obtain a medium which contains the food constituents which are afforded the bacteria in the living larvae.

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*The author wishes to acknowledge the assistance of Dr. E. F Phillips, in Charge of Apiculture, under whose direction this work has been done. These results have been reached since the author has been connected with the apicultural investigations of the Bureau of Entomology.

Inoculation experiments have been made by feeding to a healthy colony the scales from combs which had contained brood affected with American foul brood. The result of the feeding was that the colony became affected by disease, the symptoms of which were the same as those observed in the apiary where American foul brood is found. Like symptoms have been produced by feeding scales which had been put into ordinary meat bullion, incubated for twenty-four hours, and then heated to 65 degreess C. for twenty minutes.

On microscopic examination of the decaying larvae dead from the disease thus produced experimentally, the same large number of spores and rods are seen as when samples are examined which are taken from an apiary affected with American foul brood. From these dead larvae pure cultures of Bacillus larvae were obtained from plates, using the new medium described above. These experiments show that by the feeding method the disease may be produced and that the contagion is found in the scales. The second experiment tends to indicate that the cause of American foul brood as found in the scale is not killed by heat at 65 degrees C. applied for twenty minutes.

Up to the present time there is no authentic record of this disease having been produced by experimental inoculations of pure cultures.

Knowing that by the feeding method the disease may be produced, pure cultures of Bacillus larvae have been mixed with sterile sugar sirup and fed to healthy colonies with the result that the disease appeared in the colonies within three weeks with symtoms identical with those produced by feeding the scales of the disease. In the ropy brown mass of the decaying larvae in the disease which is produced experimentally by feeding pure cultures of Bacillus larvae there are found the same large number of spores and rods as when the disease is produced by feeding the scales or when the disease is found in an apiary. Pure cultures of Bacillus larvae have been obtained from the larvae dead from the disease produced experimentally by feeding pure cultures of Bacillus larvae.

Some European investigators of brood diseases omit the symptoms, so that it is impossible to tell which disease they are investigating. Their descriptions of microorganisms also are entirely too brief. These facts have led to much confusion, and they necessitate much additional work on the part of other investigators. They have also added to the present confusion. From what can be gained from their papers, the author is inclined to believe that Burri has been working with Bacillus larvae and has been referring to it as the "bacillus difficult of cultivation;" that Maassen has been working with Bacillus larvae and has been referring to it as Bacillus brandenburgiensis, and that von Buttel Reepen has referred to Bacillus larvae as "B. burri." It is hoped that this confusion may soon cease to exist.

In the study of Bacillus larvae on this new medium some interesting additional facts have been observed in the morphology and cultural characters of this organism which will be given in a bulletin from this Bureau in the near future. One fact is mentioned now because it seems to have caused one German investigator, Dr. Albert Maassen, to fall into error in the interpretation of certain findings. This fact is that this species, Bacillus larvae, produces a large number of giant whips. (Giant whips are at present believed to be in some way a modification of flagella, the motile organs of bacteria.) These giant whips appear in pure cultures of Bacillus larvae and persist there for a long time. The structures which Maassen evidently saw and reported in two different publications, naming them Spirochaeta apis, are nothing other than giant whips which normally belong to Bacillus larvae and which are formed by the growth of Bacillus larvae in the larvae of the bee.

Maassen seems to have no further evidence that the structures which he saw are spirochaetes than what could be gained by a microscopic examination of the remains of the dead larvae which had suffered from this disease. The appearance which he interprets as a spirochaete in the process of division can be seen in the giant whips obtained from pure cultures of Bacillus larvae. These giant whips are found in the decaying larvae which are dead from American foul brood experimentally produced by feeding pure cultures of Bacillus larvae.

The author has observed these structures in a large number of examinations of American foul brood, especially in the hanging-drop preparations made directly from the dead larvae. There is nothing else contained in the dead larvae which can be seen that resembles a spirochaete, and since Maassen made no mention of the giant whips found there so abundantly, it is quite certain that he has made this mistake.

This preliminary note will be followed by a bulletin which will contain in full the results of recent investigations by others on the brood diseases of bees and a detailed account of the work done here.

The results may be summarized as follows:

(1) In previous publications the author has made no claim that Bacillus larvae is the cause of American foul brood.

(2) A medium has been devised by which cultures of Bacillus larvae may be obtained in large quantities suitable for experimental inoculation. This medium consists of the sterile filtrate obtained by diluting and filtering the crushed bodies of bee larvae through a Berkefeld or other fine filter.

(3) American foul brood has been produced by feeding pure cultures of Bacillus larvae, and the symptoms of the disease are the same as those produced by feeding the scales of this disease and as those observed in the apiary where colonies are affected with this disease.

(4) The structures described by Doctor Maassen, of Dahlem, Germany, as spirochaetes and named by him Spirochaeta apis are not spirochaetes, but normal structures produced by the growth of Bacillus larvae. These are known in bacteriology as giant whips.

Approved:
W. M. Hays,
Acting Secretary of Agriculture.
Washington, D. C., July 15, 1907.

Prevention of swarming is accomplished by L. Arnold by a simple treatment: He transfers bees and brood combs into an empty hive, then he brushes all bees from the combs in front of their old hive, cuts out all queen cells and replaces the combs. Two frames filled with comb foundation are added. He says, that this treatment confuses the bees and they give up all ideas of swarming.—Le Ruge Belge.

EXPERT ADVICE.

JOHN. R. RAGLE.

HAVING COMPLETED my second season at bee-keeping, I now feel fully qualified to give advice to beginners. I shall commence by telling them how to find a queen. The proper way is set down in the bee-books and it is the one the beginner strives to follow but he usually gravitates into the common way, which is the one I shall describe.

Lift your smoker, put on your bee-veil and go, of course, to the hive, Puff smoke in at the entrance; then pry the cover open and puff smoke in there. The bees will begin to "boil out" and to sting but you must slap the cover back, smashing a number of them, puffing again at the entrance, this time so vigorously that flames will issue and sizzle the bees that refuse to stay in and be good. Jar the hive, also. After five minutes remove the cover and try to get out the first frame. It won't budge; try to pry it loose with your $1.50 pocket knife. The blade will snap in two, but don't mind that; run as quickly as possible and get a chisel. Apply it to the frame and the end of the top bar will split or break short off; but you will have the frame loosened so that you can now lift it out without difficulty, although the comb will be sprung and leaking. Set it, "leaning perpendicularly", against the hive and remove the next comb in the same manner, glancing over it for the queen and set it in the same position against the other comb. Both combs will be bruised and bees between them will be smashed. Take out all the combs in the same manner, looking over each one for the queen, which you will not find.

After they are all out look for her in the bottom of the hive, but she won't be there. Pick up the combs, looking over each one carefully the second time and begin placing them back in the same order in which you took them out. This you will find to be impossible. The combs will jab into, and bruise one another and mash bees. By this time your pets will begin to dart furiously at your hands and wrists, which have already become swollen with stings. Pick up your smoker to subdue the bees. The fire will be out. There will be no time to light it again now, so you must resolve to proceed as calmly as possible and get the queen, if eyesight can find her; it can't. Bees will fly thicker about you. A few will find an opening in your veil where it is supposed to remain tight about your neck, which it never does; they will sting you under the chin and two or three will plant their javelins in your nose and eyes.

There is nothing now to do but to grab up each comb quickly and jam it back into the hive. This will not be easily done, for you will find one or more of them broken and falling out of the frames.

Run to the house, mindless of stings and pursuing bees, turn all the drawers topsy-turvy, rake everything from the shelves, breaking dishes and knocking down pans and bric-a-brac, looking for the ball of twine and blaming your wife for having misplaced it. Then, after she has sweetly reminded you that you must have left it in the corner of the orchard where you were budding trees, run for it, get it and tie up those broken combs, slamming them back into the hive, meantime looking for the queen.

You won't find her; but slap the cover on, mashing more bees, and retire with. every vulnerable spot on your body containing a sting and pursued by a hundred angry bees, still intent on stinging. Retire further yet and sit down. First collect your scattered thoughts and then begin to pick out the stings.

This will be a delicate moment. If you are not a religious man then you may begin to cuss silently and gently, letting it swell gradually into a grand anthem.

Don't cuss the bees. It will do no good. Cuss the hives and the hive-maker first, then the smoker and the man who invented it. Cuss all the bee-books and the bee-writers, whose advice you so zealously have tried to follow and call them falsifiers and humbugs.

It will be a good idea to kick something. If there are any empty hives or supers around you may kick them and kick them good and hard, but never kick a hive with bees in it. If your wife comes out to see what the trouble is, "sass" her. When the aroused bees begin to chase her back into the house again then laugh diabolically.

By this time you will have become so warm that it will be necessary to remove your bee-veil which is worthless, anyhow. As you do so a few bees will sting you on the scalp. The pains will be so exquisite that it will set you to howling and dancing. The proper time to do this is when some one is passing or when Mrs. Bishop, your neighbor, is watching you.

As the bees will continue to sting, it will be well to retreat to the cellar, where you may cuss everything and everybody, commiserate yourself and wonder why it is that the good Lord has made life so hard for you. Do not fail to regret that you ever saw a bee or heard of bee-keeping.

It must be distinctly remembered that all the above-mentioned cussing is entirely at your option. I do not recommend it but am only describing the usual method of procedure. If "dog-gone it" and "confound it" are strong enough to relieve your feelings then these words may be used, although they are not entirely orthodox. Lady bee-keepers may use them with propriety and I have observed that they frequently aid my wife in her work about the hives, although she is not yet an advanced bee-keeper.

Now, in a spirit of grim determination, you must put on a double suit of clothes, readjust your veil, get gloves and tie your trousers and sleeves at the extremities. Go back to the hive where you left your smoker, which in some mysterious way has become ignited again and which has set the dry grass on fire. You will be apprised of this by the alarms sounded by your neighbors. Stamp the fire out and then stamp the smoker, stamp it all you want to, for you can't make it any worse than it is. Now get your Alley queen trap and set it in front of the entrance. Take out every frame and brush the bees off, determined to find the queen or die. You may as well die, for you won't find her'. As you are brushing the last frame the weight of bees gathered on the trap will cause it to tumble off, killing a hundred or so, and in the melee, the queen will slip, unobserved, into the hive again. As it will now be sundown, you may as well bathe your swollen body and go to bed, determined to find the queen next day, if you have to brimstone the whole colony to do it.

When morning comes and the bees are flying well, you will be feeling better. Whistling blithely go to the hive in your shirt-sleeves without veil, smoker or gloves gently lift the cover and slide back the first frame. Take out the second one, giving it a passing glance, and there, radiant, effulgent, glorious, shimmering, will be your queen, in stately oblivion of you and everything, except her egg-laying. Remove her, close the hive and go away, without receiving a sting.

You may then sit down and write to the bee-papers, telling how easy and pleasant it is for an orthodox bee-master to find a queen.

Stent, California.

Quite a number of authorities claim that the common honey-bee was not imported into Australia till 1862. Of late Dr. V. Buttel has searched for better evidence and he found that according to a magazine, "Zoolog. Garten" bees were imported during the year 1840. According to an extensive work on bees the English government sent the first bees to Australia in 1845 or possibly as early as 1837, and according to an entomological work of William Jardine entitled "Bees, British and Foreign," printed in London, 1835, the European honey-bee has more than once been brought to Sidney but without success, for the bees "left" the hives and went to the woods. One colony was brought to Van Diemens Land by Dr. T. B. Wilson in 1830. This colony came from London in a wire cloth cage and swarmed several times the first year. In the "True Colonist," of February 14, 1845, it is stated that a colony, a descendant of Dr. Wilson's first importation, belonging to a gentleman near Holart, had cast its 18th swarm.

According to the above statements it would seem that the brown bee must have been brought to Australia not later than 1830. The Italian bee was introduced by T. W. Woodbury, Exeter, England, who sent four fall colonies to Australia in 1862 which arrived there safely after a journey of 79 days. (From Central-blatt.) Bumblebees were brought to Australia in the year 1877.

THE BEE-KEEPING WORLD

Staff Contributors: F. Greiner, Adrian Getaz

Contributions to this department are solicited from all quarters of the earth

GERMANY.

Fruit, Bloom, Honey, Etc.

In a report, Rev. Graebener of Baden, Germany, says that the fruit furnished him quite a little honey this year, some colonies gaining 8 1-2 lbs. per day. He pronounces this honey of the best quality and flavor, satisfying even the most exacting epicure. He always has a hive of bees on scales. One colony, having cast a swarm the day previous, gained six pounds and he concludes that swarming does not always lessen the honey-crop. He does not favor dequeening or caging queens for the purpose of increasing the honey crop. His experience is that medium strong colonies in normal condition give the best results.—Leipz. Bztg.

N. Ludwig, Biever, Germany, practices the following method to renew queens: He cages the queen. At the same time he inserts a ripe queen cell. He says that the bees do not become uneasy as in case of removing the queen and do not destroy the cell given. After a few days the caged queen is removed. The young queen mates very quickly.

An international bee-keepers' congress will not be a success, thinks P. Neumann, on account of the great cost to the individual bee-keeper who would like to attend, and this is probably so.

When extracting, the honey will come out of the combs cleaner if the extractor is turned in the opposite direction a few rounds, says the Leipz. Bztg.

A movement is on foot in Germany to raise a fund for a Dzierzon monument. So far the contributions have come in very sparingly.

Up to the year 1625 besswax was used for seals, although a substitute had already worked its way into favor; but the sealingwax of the present day was not thought of till after the above named year when by accident (a fire) the combination of shellac, resin and venetian red was discovered by F. Rousseau, of Paris. Since then this mixture has been used for seals and sealing bottles, etc.—Allg. Ztg. f. Bzcht.

Ferdinand Dickel is convinced that "clipping" is the thing for him. It has saved him (and it saves us) many a swarm. He discovered that the holding of the queens while clipping had the effect that they were balled and killed some times; (Die Beine) (to hold a queen while clipping is only necessary with nervous acting bees).

The white "scum" which forms on the surface of extracted honey consists of little air cells surrounded by a thin covering of honey. —A. Kaiser in Bztg.

Honey may be considered ripe, says Dickel, in Die Biene ,when it does not run out of the comb when the latter is held horizontally for two minutes; this refers to combs which were not sealed by the bees. Sealed honey must be considered ripe but is not always so.

If extracted honey is exposed to the rays of the sun (covered by netting) for three days scum will not form after if said honey is then drawn off into retail packages.—Dickel.

A good, well served strawhive, bell-shaped, is offered by the dealers at just one dollar.

Rev. Burghardt holds, that it is a great advantage to the bees to have access to an artificial watering place though there may be brooks or ponds in the vicinity, for he says, many bees will find an untimely death in the water by being blown into it by the winds.—Phaelz. Bztg.

ENGLAND.

It is stated in "BienenVater" that England has a map with every apiary located on same giving the size of each, etc. Thus is shown the extent of apiculture in England.

AUSTRIA.

Rev. Tobisch, Wotsch, divides his apiary into two lots; one is run for honey the other for increase principally. The colonies of the latter class are in such hives as straw skeps, box hives, log gums, etc., and are kept on the "noli-me-tangere" plan. The extracting from the former class is done at the close of the season, about July 15, when the preliminary work for the wintering of the bees may be done at the same time.

Some retail packages for extracted honey offered are so arranged that they can not be opened without tearing the label. This would prevent their being refilled by another party and palmed off as the original article.

CAUCASIAN BEES.

A correspondent of the Deutsche Illustrierte Bienenzeitung, M. A. Shilling, alludes to this race of bees, that, he says, the Americans are praising, and which is to eclipse even the so-called Red Clover Queen. They have even sent out Mr. F. Benton to procure these bees for the department at Washington. This appeared necessary, as Dr. Phillips, who replaced Mr. Benton during his absence, stated that the only pure Caucasian queen they had was dead, and they were unable to obtain a further supply from the Caucasus. Mr. Pratt also asks Pfarrer Strauli of Switzerland where Caucasian bees can be procured outside Russia. Mr. Macdonald, of Banff, a contributor to the British Bee Journal, looks upon these bees as worthless, but the Americans think that he has never had a pure Caucasian queen, and therefore has been led into error. M. Shilling says he procured directly from the Caucasus a queen of guaranteed pure race, but he is not at all pleased with his purchase. She was no larger than any other, the extremity of the pointed abdomen was shining black, and she only had two and a half yellow bands fringed with grey hairs. She lived three years, and her progeny, which varied considerably, showed her to belong to a race of no fixed type. Most of the bees had only two yellow bands, others had only one, and lastly quite a large number were completely black, with no trace of yellow bands. Caucasian bees are as good workers as Italians, but persistent robbers, and, notwithstanding the amount of brood raised, the colony was always weak, and it is probable that the bees wore themselves out in working, and especially in robbing. They wintered very badly, and must be put into cellars to shelter them from variations in temperature. To sum up, they are not so good as Italians, and certainly very inferior to the common German bee.

(With reference to the above we would inform our readers that Mr. Root wrote to the Chief of the Bureau of Entomology stating that they had as yet received no information as to the result of Mr. Benton's trip in the East in search of new races of bees, and the reply is printed in Gleanings:—

"United States Department of Agriculture, Bureau of Entomology,
Washington, D. C., May 29, 1907.

My Dear Sir—I am in receipt of your letter of May 16 asking for information concerning the results of the trip by Mr. Frank Benton in search of new races of bees.

I regret that I am unable to give you a report of this trip, since the Bureau of Entomology has received no such report from Mr. Benton, and he is no longer connected with the Bureau of Entomology. The only information which we have on the subject is a verbal statement from Mr. Benton to the effect that he found very few bees, and was unable to ship any of them to this country. The tone of his statement concerning them would indicate that they are not desirable.

Respectfully yours,
G. L. Marlatt,
Acting Chief of Bureau.

Mr. E. R. Root, Ed. Gleanings in Bee-Culture, Medina, O."

The above is sufficient explanation why nothing has been heard lately about these bees.—Eds. B. B. J.) — British Bee Journal.

THE

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The bee is a fool with defective sight. It is not so nominated in the text books, but the fact remains. (M.)

This is the month when the novice has to be reminded, aye, urged to combine his nuclei and weak colonies, also to feed them that they be not among the missing, six months hence. Put not off the work till some more convenient time but go out forthwith and combine and feed. (M.)

We learn that the U. S. Department of Agriculture is making very thorough examinations and analyses of honey from many sources. The results of Dr. Brown's work is said to be fine and promise to be of great benefit to honey producers. (M.)

Should the reader note a marked improvement in this number of The Bee-Keeper, it may be accounted for by the fact that the "editor in chief" was some thousands of miles distant during the course of its production and had, therefore, nothing to do with it. (H.)

Do not longer delay the requeening of your colonies. Replace all queens a year or more old or any that are not up to standard or whose bees are for any reason undesirable. Queens introduced now will produce sufficient bees to form a fair proportion of the winter force and will give some idea of their hardiness and wintering qualities. Also the queens will be in their prime next year and will show what their blood counts for. (M.)

In a circular recently sent out by Manager France (at an expense of some dollars to the association) there appears the statement that the A. B. K. misrepresents the Natl. B. K. A. Before the urbane Genl. Manager hands out more such remarks it behooves him to explain his association with the late League, of unsavory odor. Furthermore let it be known that what the A. B. K. has had to say about the Natl. as at present and for some time run, was quite within the truth. All things within that body are not as beautiful as some of its sponsors would have the fraternity believe. By their works ye shall know them. (M.)

Southern New England has been treated to one of the queerest seasons in many years. Flowers seemed to quite miss their reckoning and opened at all sorts of times. Fields white with daisies were seen July 23rd and goldenrod (of a late fall type) was open August 3rd. Bees have behaved to match and erratic doings are reported from many places. The honey crop has been very irregular, some places giving a heavy yield while others have scarcely supported the bees. Fortunately New England has many sources of honey and when one crop fails the bees manage to at least get a living from some other and occasionally surprise their keeper by producing a surplus when he scarce expects it.

BEES IN A GREENHOUSE.

There are under the writer's care, the bees used in several large greenhouses devoted to the raising of cucumbers. In one house, which is 350 feet by 30 feet wide, there are two colonies, one at each end. From the flowers on the vines the bees not only got more than a living but one colony threw off a good swarm. The young queen in the parent stock is now laying, but whether or not she was fertilized in the greenhouse cannot be positively stated, though the chances against her getting outside and back again were slight. There were an abundance of drones inside and, as is apparent, the conditions of the colonies were normal. (M.)

HONEY PRODUCTION IN HAWAII.

Regarding the qualities of the honey of Hawaii to which a clipping in these columns recently alluded, we have obtained the following from the U. S. Department of Agriculture: "In the Hawaiian Islands there are two distinct types of honey produced; first the pure floral honey gathered from algeroba, Prosopis juliflora, of which there is annually produced about two hundred tons, and second a mixture of floral honey with honey dew of a blend made by the bees in all gradations which constitute their honey-dew honey type. Of the latter there is about four hundred tons produced annually. The honey-dew honey is quite different chemically from the floral honey and, during the agitation brought about by the National Pure Food Law, some chemists declared this honey to be adulterated. This is not the case but was brought about because of the fact that the chemists in question did not know the analysis of this other type of honey. Owing to this difference in chemical composition, it has been decided that such honey must be put on the United States market as "honey-dew honey."

THE MASSACHUSETTS FIELD MEET.

At the recent Field Meet of the Massachusetts B. K. S., the attendance was large, as might have been expected when held on the grounds of that most genial host, Mr. Geo. W. Adams, of Byfield.

The "Pit" consisted of a large table fenced off from the eager throng by a rope and on this table were performed sundry stunts by different visitors. Among some of the interesting features were the following: By Mr. Fogg, the dequeening of a swarm of wild blacks; the introduction of an Italian queen by Mr. Alley; general overhauling of a colony of Mr. Adams' choice Italians by Mr. Farmer, the gentleness of the bees being of sufficient note to warrant some promoter calling them "Yellow Caucasians" or "Yellow Banats," stranger things have happened; Mr. Adams showed a colony with laying workers and explained their nature, origin and pointed out the evidence of their presence; also Mr. Adams showed a swarm hived June 18 which never had a queen with them after leaving the parent stock but were still at work on that date, July 27; an old hive in use previous to 1776 attracted some attention. The meeting was pronounced a success and most enjoyable. (M.)

MISFIT APICULTURAL ADVICE.

The amount of labor involved in most of the apicultural systems as described from time to time is stupendous when applied to many colonies.

How the advocates can follow them and continue in the business is a puzzle. From the indefiniteness and ambiguity of some of the instructions we surmise that they do not do all that they advocate. The perusal of two or three recent articles written for specialists and by men who make honey raising more or less of a business contained a noticeable number of such instructions. The amount of shaking, brushing, queen hunting, lifting, shifting, etc., is beyond all reason, furthermore most of it is unnecessary. If the laws of bee life were better understood much of such work would be avoided. But humanity is slow to learn and so the old, old ways continue with slight and slow modifications and men grumble and quibble, argue and debate going over the same old ground year after year. As we have often said in these columns the text books as often mislead as guide and much that appears in the periodical press is inspired in the supply dealers' interest. Man cannot serve two masters and it is impossible for a supply manufacturer or for those dependent more or less on his largess to give an unbiased and fair opinion where their interests are concerned. Recently there appeared an article advocating telescope covers for winter protection. It was plausible and well fitted to make sales of such covers but it was not written by or in the interests of the plain bee-keeper. No one device, be it hive, cover, bottom-board or what not, will ensure safe wintering. The telescope cover is all right as far as it goes but it is expensive and is not as good as cheaper and more simple devices. A watertight cover, a hive through which drafts cannot pass, a wide entrance, which is to say one by one-half inches, floors a foot above the ground, and a sheltered location are the chief external essentials which we can supply to protect the bees. The covering of the hives with black tarred-paper (or felt, some call it), is a great help though some persons object to it, but the objectors seldom have given it a proper test.

But let the novice bear in mind that no combination he can devise will ensure safe and profitable wintering to worn out, run down colonies and poor queens. (M).

THE SEASON IN COLORADO—COLORADO STATE FAIR.

Erie, Colo., July 10, 1907.

I want to urge upon all Colorado bee-keepers again the importance of making an exhibit of some of their products at the next annual State fair to be held at Pueblo.

Mr. Paul Wilson, president of the State fair says the old premium list will remain in force, and requests that bee-keepers make as large an exhibit as possible, assuring that he will give us sufficient room. He has also promised to secure suitable silk ribbons for premiums in the apiary department.

If you can not attend the State fair be sure to reserve some of your best products for exhibition at the Colorado State Bee-Keepers' Association next fall. You will find the premium list elsewhere in this journal.

Any bee-keeper who is thoroughly interested in his business will surely take pride in making an exhibit of his products, thus showing what he has done or can accomplish by skillful manipulation of the hive, and it will also give him publicity as an up-to-date bee-keeper, and a man that has "real honey" to sell, if he keeps reminding the public, regarding the purity and wholesomeness of his products, by exhibition, advertising, etc.

If you have not paid your dues to the State Bee-Keepers' Asssociation, attend to the matter at once, and have your name enrolled as a member, and enter the contest for the premiums. You will also receive The American Bee-Keeper free of charge, as it is the official organ of the Colorado Bee-Keepers' Association.

At present it seems as though there will be an unusual scarcity of honey this season, but doubtless there will be many small bee-keepers who will trade or sell their honey for considerable less than you care to sell yours, nevertheless they will set the price on your honey in many instances by so doing.

I think the up-to-date bee-keeper would profit if he would purchase all the small lots of honey in his vicinity even if he had to pay a little more for it than it is worth, in order that the price of honey may be maintained at a higher figure, instead of his being compelled to place his own honey on the market in competion with inferior grades. Such was the condition in 1904, when all kinds of honey were dumped on the market, causing the honey market to go to pieces in a short time. This could be avoided to a great extent if progressive bee-keepers would act on the above suggestion.

It has often been said by many bee-keepers that in working artificial increase by shaking, that they had difficulty in having the bees build worker combs from foundation starters in the frames.

I have made considerable increase this season in this manner with but very little difficulty in making the bees build worker combs. I always select a young queen to be placed in the hive with foundation starters, as she is likely to be laying well and the bees will build mostly worker comb. However, each time I visit my out apiaries I look into these swarms and see that they do build worker comb, placing the combs that are not finished in the center of the brood nest where they will be built into nice worker comb by the next time the apiary is visited. I think the reason so many swarms build drone comb after being treated by this method is because the bee-keeper fails to look into those hives until it is too late to remedy the combs, except by cutting out the drone comb, and if they are left until the following spring, it is useless to cut out the drone comb before swarming time as they will build drone comb again, so it is very important that the combs are built properly while the queen is young.

I have treated seventy-five swarms in this manner this season, and every one of them have as nice worker combs as was ever built by any bees.

I have just received a program of the Colorado State fair which will be held at Pueblo, September 9th to 13th, 1907. The programs can be obtained by writing to the Secretary of the fair. The premiums in the apiarian department are about the same as last year.

August 6th. The weather has been very warm the past two days and if it continues thus I look for a nice crop of honey.

S. Francis.
Secretary Colorado S. B. K. Ass'n.

Bees Dying Outside.

It is a known fact that bees about to die leave the hive and die outside if possible. At least such is the general opinion. Mr. Luby, an Irish apiarist, undertook to verify the truthfulness of that opinion.

In the fall of 1876 he placed eight colonies in a room of uniform but not high temperature. The hives had a large hole in the bottom and were placed on boxes without top and with glasses on the sides and furthermore provided with an opening that could be closed entirely or covered with a perforated zinc. All the hives except two were arranged so as to be completely in the dark. The two others were near a window.

In the dark hives, the bees were quiet during all the winter. All the noise heard was now and then the sound made by a dead bee falling through the hole in the bottom of the hive down on the bottom of the box.

In the other two, now and then, a bee would be seen coming out of the hive into the box, try to get out of the box and finally die there without ever attempting to regain the cluster no matter how close to it they might come in trying to find an opening to lead them outside. When the boxes were opened so they could get out they invariably went to the windows of the room. and out if the windows were open. Two of the hives left out of doors were arranged the same way and gave the same results. The bees dying in the hives had all the appearances of old age and were always full of honey.—L'Apiculteur.

Bee-keepers' Associations should include a free subscription to The American Bee-Keeper. We'll accept yearly subscriptions at 25 cents. Try the plan.

REPORT OF THE COLORADO STATE BEE-KEEPERS' CONVENTION.

CONTINUED FROM LAST MONTH.

Mr. Gill: If you take queens you may not need any drones; they will be in the way. I don't think it possible to find a suitable place within eight miles.

H. Rauchfuss: My idea of such a place is where there are no bees and water near. That is the location I am looking after. Upon the divide you will find quite a number of colonies of bees; you know there are some people go out hunting for bees. I think we will have to look for a location where there is no way of bees living very long.

Mr. Gill: We want a place where it will be away from other bees and can be handy for bee-keepers.

H. Rauchfuss: About the drones you might have only one out of a hundred we care to mate our queen with. We want a strain of bees that will produce more honey.

O. Foster: I hardly think it would be practical to have a queen breeding yard, as Mr. Gill says, within ten miles. If there is a location where there may be rain enough to supply cattle raisers, we could probably arrange it that way.

V. Devinney: I think there is a place in South Park, I believe no bees are there. To me it seems it would be an ideal place; there is a house, trees, etc.

Mrs. Booth: I think it could be investigated from Cherry Creek up to the Divide.

H. Rauchfuss: I have known a bee hunter to hunt bees up in that locality.

Mrs. Booth: Up towards the Divide? I was just thinking it would be a good location for anything like that.

Mr. Tomlin: The divide no doubt would be all right, but the only way we can do this is to live near an isolated place. We want someone that knows something about it.

V. Devinney: I said that it was necessary to have state aid. The government of the United States has taken great interest in the West. Now then, in order to carry out that view of the interest in the West for establishing experiment stations, I think it would be well for this Association, in this meeting as a State Bee-Keepers' Association, to appoint a committee of ways and means to let them confer with those of authority.

F. Rauchfuss: The view that Mr. Devinney takes is perhaps a good one; I have anticipated that a little over a year ago and wrote to the department of entomology, stating what the inducements were of having an isolated apiary for the mating of queen bees. I have received from Mr. Benton encouragement in the matter, but at the time would not promise any material. As he has come back and has taken charge of his work again, we ought as an association to make another attempt, not expecting them to do all the work or furnish material to do the work with.

Mr. Gill: Have some real choice drones to do this work. The Swiss government has established mating stations and is meeting with good success. If they could do that, the United States ought to be able to do this also.

O. Foster: It is not necessary to ask for help now. We have all that we need to get for a start.

H. Rauchfuss: This can be done, but if we find a proper location we can get them mated. Then another thing. There will be a great many bee-keepers willing to pay a good price for those queens. I feel the right thing to do is to form a stock company by raising money by selling stock, and let them buy stock and go out in this way, and if they do produce good queens they will make money out of it. The general public will be benefited by it.

Mr. Gill: Have a committee appointed to communicate with Mr. Benton with a view of taking up this matter with the experimental station to perfecting a queen-mating apiary.

Mr. Booth: It is asking too much to ask them to do this. We are asking too much and will not get it. I hope that the committee be appointed to ask for such a thing do not get it. We might buy such a place of an individual and have him there and pay him for his work. But the other way, of asking the government to establish a breeding place for our Association, we are only opening the door for every other bee-keeper.

Mr. Foster: As for colonies of bees they can be furnished. When we do get to raising queens, the station will soon receive the benefit, while if the Association would go in with the experimental station they would furnish this, would help us out and make us a stronger association and double our membership.

Mr. Gill: The government is not a bit modest and will let us know whether they will help us or not.

Mr. O. Foster: This motion is not exactly in the form it could be. It seems to me what we want to find is a location where queens can be purely mated. What we want is to furnish a place where bee-keepers can make their own stock, we want something that we can depend upon as to the mating of our stock.

Mr. F. Rauchfuss: The government is distributing queens and is distributing them to responsible parties, that they may sell queens again and not at a high price and not to sell less than 150 queens a year.

Mr. Collins: I am one in favor of this yard, if we can get an isolated place, we can be sure of getting just what we want. I am in strong favor of having a committee to attend to this.

Mr. Booth: If I understand the idea I think I am right, the idea here was to establish a pure bee farm at some isolated point where we can send our bees. Now we ask the government to do this. That would be a great idea. You might as well ask the government to buy the land for Colorado farmers to work. I say [illegible] appoint a man that we think is capable to take such a position and then buy our queens from him and we send the best type of our queens to him.

Mr. O. Foster: It is not a bee farm we want at all, we want a location where we are sure that we can have our queens purely mated. I move that a committee be appointed to see to this.

Mr. Collins: I move that the committee consist of Mr. Frank Rauchfuss, Mr. O. Foster, Mr. Gill.

QUESTION BOX.

Question one: What is the best method of finding a queen whenever it is necessary to locate her?

Mr. Charles Adams: Lift the frames out and look for her until you find her. Take middle frames first.

Mr. Bolinger: The way I do is to lift a frame out and to separate it from the hive so she won't be able to crawl on to another frame while I examine the first one taken out. I commence in the center to look for the queen.

Mr. A. Wilson: My idea of finding a queen is to commence one side and take out the comb and look over it. Take frames out one at a time and look carefully. I go clear through to the other side. If I do not find her I shut the hive up and go back in an hour.

Mr. Foster: I found a good plan to use a good deal of smoke, and empty hive ready to put the frames into as you look over them. In case you do not find her you can turn your hive up to the sun and find her after she has fallen down in the corner of the hive.

Mr. Pease: Do you do this in the heat of day?

Mr. Tomlin: It may be the queen is in the center and perhaps on the second frame, I take two frames out and take the frame next to me, I most generally find her by going over the frames twice.

Mr. Pease: Where do you find your queen in the middle of the day?

Mr. Tomlin: Near the edges in the middle of the day, in the center mornings.

Mr. Porter: The condition of the combs indicates much. If a queen is laying a great many eggs you will find this is the comb the queen is liable to be on. If you have a comb perfectly filled with brood she is not liable to be on that as her work is on the comb where there is work for her.

Mr. Collins: The question is one of mine. If after I put supers on, I just take my smoker quite heavily, then I set all of my frames out two at a time just as fast as I can, then I look for my queen. I find as high as 19 out of 20 by this method.

Mr. H. Rauchfuss: How many can you look over that way in a day?

Mr. Collins: I have taken out as high as fifty and sixty in a day, but sometimes I would go over them twice.

Mr. Gill: I always like to find all I can. By their work ye shall know them. I use very little smoke, I usually go and hunt for my queen about 3 or 4 o'clock in the afternoon.

Mr. Porter: There is a certain action or moving of bees which will draw your attention, which will indicate where the queen is. Queens from one to five days old you will find are liable to be on the further end of the comb.

Question 2: "Is the Pure Food Law responsible for the advance in the price of honey?

Mr. F. Rauchfuss: The price on extracted honey in California which has furnished the main supply for United States has advanced fully 50 per cent., you cannot buy white California honey less than six cents and it is almost impossible to get it at that. Perhaps from five to ten cents a gallon. The price of comb honey has gone up some but this is due to the scarcity of product.

Mr. Gill: Perhaps Mr. Wilson can give you the information desired as I am not posted on the market.

Mr. Wilson: I don't know that I can give anything reliable at all. I was in Mr. Mercer's establishment several times but I did not learn of any advance of prices, the price was about 4 1-2 cents per pound early in the season.

Mr. Gill: Mr. Mercer had then about 25,000 pounds nice white honey they were putting it up in the same way as our Association is doing here, but their honey has advanced since that time from 10 to 20 cents. I did not find any honey that was being offered there for less than 6 cents and they lay it to the Pure Food Law.

Mr. Collins: All foods have advanced about 25 cents, all foods and all food supplies advanced a little over 20 cents. I could not say that the reason honey has advanced is on account of the Pure Food Law.

Mr. C. Adams: I have not heard of any advance. I got 1-2 cent more for my honey this year than two years ago, but I have not seen any advance since the first of January, which I believe was the date the Pure Food Law took effect.

Mr. F. Rauchfuss: The standard of the agricultural chemists of the United States, on extracted or strained honey is, honey extracted out of combs or pressed out must not contain more than 25 per cent. water. Now each one of you that puts up extracted honey don't put any honey up thinner than that.

Mr. O. Foster: I would like to ask how you can tell whether our honey weighs 25 per cent. water or not.

Mr. E. Rauchfuss: The honey that will weigh about 11 1-2 pounds per gallon, you need not be afraid to put out, for it is not likely to be troubled.

Question 3: What is the best time to requeen?

Mr. Collins: Sometimes I go into my apiary with a view of getting out any queens of any age that are not what I consider top notch. If I have foul brood in an apiary the best results I had was in killing the queen.

Mr. Gill: I think a person can prevent swarming, if you have got a ripe cell. This is a good time for requeening. I used to think that anything that would hatch a queen would do but believe now otherwise. I just want to get those cells that are up to my standard and you can put those cells right in where there is a strong colony. Follow nature and you will be alright.

Mr. Collins: I think the best time for requeening is when they are superseding. If I find that they have not superseded, use the cells that are ready, and have not produced as much honey as I thought they ought to I think it is a good plan to requeen.

Mr. Miller: I have studied on the swarming and requeening, and killing the queen, I cannot see that I have ever had any success in that. I allow nature to tend to that herself as far as I can.

Mr. Adams: The less fussing I do with them the better I get along. Let nature take its course instead of fussing about the hive.

Mr. Gill: How do you control swarming?

Mr. Adams: Shaking.

Mr. Gill: How many bees do you handle?

Mr. Adams: About 700 to take care of, have one man with me this year. 900 three years ago.

Mr. Gill: 1,000 swarms of bees increased to 1,340 got me 60,000 pounds of comb honey. If I let them have their way of swarming I would not have gotten satisfactory honey. It takes all this fussing. I can take care of 1,000 swarms of bees, I would have to have ten men to stay three months if I allowed swarming.

(To Be Continued).

PREMIUMS FOR COLORADO BEE-KEEPERS.

At the meeting of the Committee on Exhibits held March 2, at Denver, the following premium list has been drawn up by the committee and the following list of premiums will be given away at the next meeting of the Colorado State Bee-Keepers' Association. All paid up members are eligible to take part in this contest.

	1.	2.	3.
No. 1. Best Nucleus Italian Bees & Queen in Observatory hives	$3.00	$2.00	$1.00
No. 2. Best Nucleus Carniolan Bees & Queen in Observatory hives	3.00	2.00	1.00
No. 3. Best Nucleus Caucasian Bees & Queen in Observatory hives	3.00	2.00	1.00
No. 4. Largest & best display of bees of various races	5.00	3.00	2.00
No. 5. Best case of white comb honey	3.00	2.00	1.00
No. 6. Best case of light amber honey	3.00	2.00	1.00
No. 7. Best & largest display of comb honey	5.00	3.00	2.00
No. 8. Best display of comb honey to be product of a single colony for the season of 1907	3.00	2.00	1.00
No. 9. Best 50 lb. of white extracted honey in suitable glass jars for retail trade	3.00	2.00	1.00
No. 10. Best display of 50 lb. of amber (light) extracted honey in suitable glass jars for retail trade	3.00	2.00	1.00
No. 11. Best display of granulated extracted honey in small packages	2.00	1.00	.50
No. 12. Best & largest display of extracted honey	5.00	3.00	2.00
No. 13. Best display of 10 lb. yellow beeswax	2.00	1.00	.50
No. 14. Best display of special designs in beeswax	2.00	1.00	.50

We have also drawn up a few rules for the judging of these exhibits which are as follows:

The best case white comb honey, the best case light amber, and the best photograph, exhibits Nos. 5, 6 and 16, to become the property of the Association, the premium to be paid owner of the honey.

In judging bees the correct markings of each race, quietness on the combs, number of bees in the observatory hive, the appearance and general condition of the comb on which they are displayed and the appearance and the condition of the hive in which they are exhibited should be considered in their proper rotation.

In judging white comb honey the grading rules adopted by the State Association should be accepted as the standard. In light amber honey the same rules should apply excepting color, which matter should be left to the option of the judges.

In judging extracted honey the flavor, color and body of the exhibits should be considered first, then the attractiveness of package and arrangement of the display. In granulated honey, flavor, texture and attractiveness of package and arrangement of exhibit should be considered.

In judging beeswax, color, freedom from impurities, and perfection of form to be considered.

	1.	2.	3.
No. 15. Most instructive display of Apiarian Products, and of the various uses made of Honey & Beeswax	$ 5.00	$3.00	$2.00
No. 16 Best Exhibition of Photographs of Apiaries and things pertaining to Apiculture	2.00	1.00	.50

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Committee on Exhibits,
Frank Rauchfuss,
W. L. Porter,
J. W. Pease,
M. A. Gill,
A. Elliott.

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I MUST SAY TO MY FRIENDS. Please do not send me any more orders for queens this summer. As my health is so poor I find it impossible to continue queen rearing. Thanks to all my friends for their very liberal patronage. W. W. Crim.

ITALIAN AND CAUCASIAN QUEENS and bees; best stock and no disease. My circular is free, and courteous treatment is given all correspondents and patrons. Write me of your needs. A. E. Titoff, Ioamosa, California. Oct. 7

SAM'L M. ANGEL, Route 1, Evansville, Ind.—Italian Queen Breeder. I am the only breeder of Angel's Golden Beauties; also produce one of the finest strains of bright three-banders. Only tested stock sold. Orders filled in rotation and safe arrival insured. Tested queens, $1; selected tested, $2.50. Apr.8

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HONEY AND BEESWAX MARKETS.

(Dealers' Selling Prices.)

Toledo, Ohio, July 16—There is a good demand for new comb honey, also for good grade of extracted, and same would bring good prices. We quote our market today as follows: Comb, 15 to 16 cents. Extracted, 5 1-2 to 6 cents. Beeswax, 26 to 28 cents. The Griggs Bros. & Nichols.

Kansas City, Mo., July 17.—The honey crop in this section is short. Can use any quantity. We quote our market today as follows: Fancy white comb, per 24-Sec. Cr., $3.50 to $3.65. Extracted, 9 cents. C. C. Clemmons & Co.

Milwaukee, July 18.—There is not much doing at present in honey. The supply is not large. Demand, slow. We quote today as follows: Choice white to fancy, comb, 16 to 17 cents. Extracted, 8 to 9 cents. Beeswax, 25 to 30 cents. J. Offermann & Co.

Worcester, Mass., July 18.—No honey on the market. W. H. Blodgett & Co.

Denver, July 18.—Judging from present indications, the crop of honey in this part of the state will not be heavy. The supply is very light. Demand fair. We quote our market today as follows: For strictly No. 1, new crop comb, $4.00 per 24-Sec. case. Extracted, no change from former quotations. Colorado Honey Producers' Ass'n.

Chicago, July 8.—Very little honey of the yield of 1907 has come on this market. What there has in the way of white comb has sold readily at 6 cents per pound. There is no call for other grades at the present time. Very little demand for extracted and a tendency to not take it at over 7 cents for the best grades of white. Beeswax continues to sell well at 32 cents. R. A. Burnett & Co.

Cincinnati, July 3.—The demand for extracted honey does not come up to expectations, which is probably due to the lateness of the season. Quotations range about the same as published recently. Amber in barrels at 5 1-2 cents to 6 3-4 cents per pound, according to the quality. Fancy white extracted honey in crates of 2 60-pound cans at 9 cents.

As yet, there is no new comb honey on the market. We are paying 28 cents per pound cash, and 30 cents in trade, delivered here for choice yellow beeswax free from dirt. The Fred W. Muth Co., 51 Walnut St.

CINCINNATI HONEY MARKET.

Cincinnati, August 8.—We are now receiving quite a number of shipments of comb honey which finds ready sale to the grocer at from 15c to 16c for fancy and number one. We advise bee keepers, who have comb honey to sell, to ship it now, for it is an easy matter for us to dispose of unlimited quantities. If you have any, tell us how much you want for it delivered here. Extracted honey is not in so great demand as comb honey. The prices, however, seem to be growing stiff. Although we have a big stock on hand, so far we have found it impossible to persuade big buyers to consider higher prices, for the reason that others are filling orders at the same figures, and even accepting contracts. Whether or not this state of affairs will continue, the future, only, can tell. We are still selling amber extracted honey in barrels at 5 1-2 cents to 6 1-2 cents; in cans from 1c to 1 1-2c per lb. more. Extracted white clover or fancy white in 60 lb. cans two in a crate, at from 8c to 9c. For beeswax we are paying from 30c to 32c per lb. delivered here, according to the quality. The Fred W. Muth Co., No. 51 Walnut St., Cincinnati, Ohio., August 8.

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John W. Hann

WAUNETA, NEBRASKA

DANZENBAKER PRIZES

It is to be regretted that so many bee-keepers are satisfied to produce year after year a very ordinary grade of honey as regards its appearance, when by a little more care, and having more suitable fixtures, and by taking the honey from the hive at just the right time, a much larger percentage of "fancy" or "extra fancy" honey could be produced, which would sell at a much higher price. The experience of honey-merchants generally is that there is no difficulty in disposing of large stocks of fancy or extra fancy, even when the market is dull. It is the inferior grades that suffer most at these times. We believe, too, that bee-keepers would be very much better satisfied with their season's work if their best efforts were made to produce a really fine product. To increase further the interest in extra fancy honey, the following prizes are offered for honey produced in Danzenbaker hives during the year 1907, under the following conditions:

FIRST.—As above stated the honey must be produced in a Danzenbaker hive, either the present style or any Danzenbaker hive that has been put out within the last few years. These hives may be had of any dealer in bee-keepers' supplies in any part of the country.

SECOND.—For Classes 1 and 2 we require a shipment of approximately the amount stated, to be made by the bee-keeper direct to us at Medina. After the prizes have been awarded the honey entered for competition in Class 1 or 2 will be held subject to the instructions of the producer. We will sell it at a five per cent commission or we will ship it to any point direct by freight or express. There being good honey markets in our immediate vicinity as Columbus, Cincinnati, Cleveland, Buffalo, and Pittsburg, it can be disposed of without difficulty at good market prices, and the shipper will not have to lose a good market by shipping it here. Neither the honey awarded a prize nor that which obtained no prize is to be our property, but will be sold subject to the instructions of the producer who sends it to us. We are interested only in inspecting it to award the prizes.

THIRD.—For all honey submitted for prizes we must have a definite statement from the producer regarding the conditions under which it was produced—whether a light or heavy flow of honey, how the colony was handled, how many colonies in the yard, from what source produced, etc.

FOURTH.—For Classes 3, 4, and 5, we must, in addition to the above report have the signature of two witnesses certifying to the correctness of the report. If the party who sends us the report for the competition is well known to us we shall not require these witnesses. References may be given instead of the signature of witnesses if desired. All parties intending to compete for these prizes should send for blanks which we will furnish, on which the report may be made out.

FIFTH.—It will be noticed in the last three classes, three to five inclusive, that it is not at all necessary to send us the honey—all we require is a report.

SIXTH.—We reserve the right to limit the number of awards in each class, or to make no awards in a class if there are no satisfactory entries for the same.

SEVENTH.—No contestant will be awarded more than one prize in each class, but may make two entries if desired—one in Class 1 or 2, and another in Class 3, 4, or 5.

The classifications for the prizes are as follows:

Class 1.—For best shipment of 200 lbs. of comb honey in Danzenbaker hive.
Class 2.—For best case of comb honey in Danzenbaker sections.
Class 3.—For best report of yield from single colony in Dazenbaker hive.
Class 4.—For best report of yield from five colonies in Danzenbaker hives.
Class 5.—For best report of general results from use of Danzenbaker hive.

For each class there will be ten prizes as follows:

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Third.—$5.00.
Fourth.—$2.00.
Fifth to Tenth.—$1.00 each.

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Fifty Prizes in all.

This is the time to decide to enter this competition. No matter where you live, whether in the United States or elsewhere, you can certainly find one class in which you can make an entry; and as there are ten prizes in each class we believe that no one will be greatly disappointed in the results unless it is ourselves, and we hope that we shall not be, but see a large number of entries. Even if you fail to get a prize, you will doubtless have increased the value of your own product by your efforts to produce some big results or an extra quality of honey.

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The American Bee-Keeper

OCTOBER
1907

Fort Pierce, Fla.—Falconer, N.Y.

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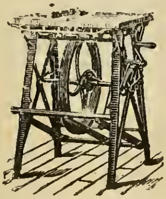

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FALCONER, NEW YORK

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The American Bee-Keeper, Falconer, New York

Raspberry Honey

I have produced a crop of extracted honey from the wild red raspberry of Northern Michigan. It would be an easy matter to send this entire crop, in a lump, to some dealer, but I prefer to give each of my friends an opportunity of supplying his table with this truly delicious honey—a honey with a flavor all its own—a flavor that smacks of the wild raspberry of the forests.

The honey is put up in bright, *new,* shiny 60-lb. cans, two in a case, and is offered at 10 cts. a pound, or $12.00 for a case of two cans. Perhaps some will think this a high price, but we must take into consideration the great loss of bees last winter and spring, the almost total failure of the white-clover honey crop, as well as that of California, together with the upward tendency in the price of nearly all commodities. Remember, too, that this is not the ordinary honey—it is *raspberry* honey; and, besides this, it has been left on the hive until it was all sealed over and thoroughly ripened, and is as far superior to ordinary honey as ripe fruit is more delicious than green.

If you prefer to taste the honey before ordering, drop me a postal, and I'll mail you a generous sample—enough so that the neighbors, too, can have a taste, and perhaps will wish to join you in ordering a case, if you do not care for that much yourself.

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THE AMERICAN BEE-KEEPER

Entered at the Postoffice, Fort Pierce, Fla., as second-class mail matter.

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FEEDERS AND FEEDING.

C. W. MILLER.

WHERE WE wish to feed a colony a large amount at once the best thing I know of is the one-quart glass fruit or honey jar, arranged on the atmospheric principle. Get some thrown-away tin tomato cans and cut off a piece from the unopened end about one-half inch deep. Place these on the top of the brood frames over the cluster of bees and set your jars of honey in them, open mouth down, after putting a small amount of excelsior or asparagus tops or fine grass under the mouths of the jars. Put an empty hive body or upper story on the hive, of course, in which to arrange the jars. If you have no empty stories use any other boxes which can be inverted and fitted to the hives. Or, a blanket can be thrown over the jars and a cord tied around the hanging edges of the blanket. Better arrange to give the feed thus during the night. Four quart jars will feed a colony in two nights. We nearly always have jars and they are always ready for business while other feeders require critical examination and materials and often mechanical skill to get them in condition to be used because they are made of wood and consequently are liable to change during the summer between the feeding seasons.

For giving the colonies their winter store, a feeder of large capacity is necessary, but for stimulating the colonies in the spring it requires a feeder of small capacity. A large feeder cannot be arranged so well for convenience in filling nor for conserving the warmth of the bees as a small one. Feeders do not cost so much but that we can afford two kinds. It is a great advantage from the standpoint of labor and also great satisfaction to the person who performs the labor. If we have a hundred colonies there is seldom more than a third of them which lack stores in the fall and for that a dozen large feeders would be sufficient, but when it comes to spring feeding for stimulation, it may need a feeder for each colony, unless we expect to feed only those which are the weakest; but, even here, I believe there is more gain by giving the feed to the strongest colonies. There would be more brood matured by the strong colonies and available to be given to the weaker colonies.

The difficulty with weak colonies is that they have to keep the eggs and young larvae, warm for a space of 21 days until it hatches, during which time there is pretty sure to come some cold snaps or long cloudy spells when weak colonies are almost sure to destroy the young brood so that when sunshiny days come again they have to begin all over again. Where, with good weather, the weak colonies might rear patches of brood the size of two hands, as the weather comes to us the patches of brood are scarcely the size of half a hand, on account of lack of warmth and not lack of feed. We should get the brood ready to hatch in strong colonies, so that the young bees are already gnawing out of the cells and exchange it for combs of less mature brood of the weaker colonies. Take the comb of brood from the center of the weak colonies and insert the comb of hatching bees in its place. In eight or ten days the bees will be hatched out and eggs and young larvae in their place. Then take this young brood away from the weak colony and exchange for more hatching bees. This must be continued systematically. As there begins to be many young bees in the weaker colonies they should be fed because work will benefit these young bees and they will soon put the colony in a booming condition, to a greater extent than those old bees which are about to step off the stage of action. If we start to boom our colonies we must keep it up until the finish, or else the starting, and then withholding our manipulations will be a real detriment. It is perfectly safe to build up weak colonies by drawing from the strong where the queens are young and vigorous. We can know what our queens are by knowing how they were reared the previous season. The cheapest and best stimulating influence there is for our colonies is good queens. Do not forget this. To tolerate defective queens is comparable to planting a garden with poor seed while good seed costs but a few cents more.

The way to make bees pay is to make them work. This requires skillful manipulations at opportune times, and, for this reason the beginner may cause wastes through mistakes, etc., but, nevertheless, there must be practice even if it does make wastes which cost. We must be watchful lest opportunities pass unheeded and our profits are turned to loss. We have weak colonies and cold nights in California as well as anywhere. All through the winter it is difficult to make one bee rear more than a single substitute. While it is cool and damp for a long time, and also sunny a few hours in the day, the bees are enticed out, and being more or less stupid, large numbers never return to their hives. Strong colonies have plenty of warmth and to spare. Cool weather only makes them more comfortable, where, on the other hand, it wears out the vitality of the few bees in weak colonies to keep up a continued effort to keep their brood warm.

The first move in building up weak colonies is the getting of the strong colonies filled with sealed and hatching brood because hatching brood is the builder. With brood it is only a few days until we find our weaker colonies on a boom. By feeding we get the strong colonies on the boom about 30 days sooner than we can those which are weak and in Southern climates I have kept them in swarming trim all winter. In order to do this it is necessary that the combs already in the hives be solidly filled with honey. All combs not immediately needed for brood should be removed and the space within the hive contracted. Then feed liberally enough to compel the bees to stand about with honey in their sacs for lack of cells in which to store it. There is no danger of retarding the queen laying, in the early part of the season. If honey is in the way the bees will soon devise ways to remove it and convert it into brood or combs preparatory to rearing more brood. They should be fed often and plentifully enough to construct new comb, otherwise our feeding is not of much benefit.

As a feeder for spring I use the empty milk or oyster cans that can be picked up most anywhere. They are about three inches in diameter and four and one-half inches deep, and hold about one and one-half pounds of feed, and I use one or more to the colony. Set the end that is cut open in a bed of coals and the solder will soon be soft and that end will be easily knocked off. As the cans are made by folding the tin instead of soldering the side seam will not be opened by your fire. Take two combs out of one side of the brood chamber and hang these cans in the vacant place. Make a hole in the upper edge of the cans to hang them by. Hang them on a tack driven into the side of the top bar of the brood frame which is next to the vacant space. When the cans hang on these tacks their sides will rest against the comb with the open top of the can a little lower than the upper edge of the brood frames. Lay two or three one-fourth inch sticks on top of the brood frames so that the bees can pass over the top bars, under the quilts, to reach the cans of feed. Before pouring in feed put in each can eight to ten sticks the size of slate pencils and long enough to stand up endwise in the can. Do not use excelsior or any similar material, else bees will get tangled in it and drown when feed is poured in. In this feeder bees will work all night, no matter how cold the weather is. They will cluster in the cans also, keeping one another warm, while removing the feed. The feed should be warm when put in. By pushing the cover a small distance and raising the quilt slightly feed can be given without the least disturbance to the bees. If the cover sticks to the quilt scrape all the propolis off and put a little butter on it.

We may place feed on the bottom board of the hive and the bees will be slow to take it but on the combs above the case is different. This season at a time when honey was very abundant in the flowers I spilled a quantity of thick honey on the bottom board of a hive and it was there undisturbed two or three days later. But where I had broken several large burr combs and released a large amount of thick honey on the top of the top bars it was gathered up in a few minutes. It indicates that there is more advantage in arranging a feeder at the upper part of their combs and in close proximity to their stores.

Although a colony of bees will form its cluster more or less after the shape of a globe the space occupied with brood in each comb is more elliptical than circular and its greatest diameter lies in the horizontal direction, rather than perpendicular. This variation from an exact circular form may be influenced slightly by the stores of honey being above but it is caused mainly by the attraction of gravitation causing their warmth to rise until it strikes the amassed bees at the upper edge of the cluster and this causes the warmth to drift in a sidewise direction, since the lower part of the cluster of bees is not compacted but loosely festooned. The colder the weather is, the longer and more slim this ellipse will be, and the warmer the weather, the more circular. If the cluster was an ellipse with its longest diameter standing perpendicularly the brood at the lowest part would be very much colder than that in the upper part and in consequence the shape of the cluster of bees changes so as to hold and distribute the warmth as though it was confined beneath an umbrella, thus rendering close clustering unnecessary over the lower half of the sphere of bees and brood. Under ordinary conditions in full colonies, we find this ellipse to be about one-fourth longer than it is in depth, which, computed in inches, is about 12 inches in lateral dimensions and 9 inches in perpendicular, or depth.

As I said in the fore part of this article, if the feed we give our bees causes them to make much headway there must be a crowded condition produced to an extent that they will realize that there is need of their doing some expanding in both brood rearing and comb building. Likewise we seldom find a man making additions to his graineries and corncribs while his supplies only promise to be sufficient for daily needs. When breeding up early in the season, the bees and queen are careful and persistent in not overreaching this 12-inch length of brood circle or broodnest proper, and in case a frame is used which has a length of 17 inches, as in the Langstroth hive, the vacant space must be occupied with honey. Four combs will require about 12 pounds to be used in dummylike fashion before the feed given can exert the necessary stimulative effect upon the bees. For one colony, 12 pounds is not a great amount, but when applied to 100 colonies it amounts to about five barrels of not only idle capital, but it is an encumbrance to both bees and apiarist.

After the colonies become strong, it matters little what the shape and dimensions of the frames are. It is not an unusual thing for a few hundred bees in a colony in early spring to increase to 25 to 50 thousand bees by the time the honey harvest sets in, but it nearly all depends upon there being a good beginning. Whether we obtain 25 or 225 pounds per colony, it must result from the manipulations at the starting period.

Chatsworth, Calif.

THE USE OF BEES.

What is a bee for? If some bright boy who reads this page were to answer the question, he would probably hesitate whether to say, "It's to make honey," or "It's made to sting." Neither of which is the correct answer, the chief purpose of the bee being to fertilize flowers. This is needed in every orchard, farm and garden in the land. If there are no bees within two miles or so, then it will pay well to set up one or more colonies, even if never a drop of honey is obtained from them.

On the other hand, if bees performed no service in fertilizing the flowers, it would be a paying thing to keep them for their honey alone, for although there are years of failure when they give no surplus, the good years make up for that, so that an average of 25 to 30 pounds of honey may be counted on from each hive, providing bees have the proper care.

There is no need to multiply words, setting forth the luscious character of honey as the most delicious of all sweets to tickle the palate or tempt the appetite; nor to speak of the desirability of a plate of snow-white comb honey to set off the table when company comes. But there may be need to urge its importance as a wholesome article of food. Every person consumes an average of 65 pounds of sugar annually, an amount which the doctors tell us makes so strong a draft on certain organs to prepare the sugar for proper assimilation that there result disorders of the stomach and intestines, and in some cases that dread scourge,

Where the Delicious Sage Honey Comes From.

Bright's disease of the kidneys. No such change is needed in honey; it is already converted, so as to be ready for immediate assimilation.

The craving for sweets is natural to a child and it is better to satisfy it with wholesome honey than with poisonous candy. Ask him whether he prefers the honey or the butter, and see what he will say. And yet, a pound of honey will cost only half as much as a pound of butter, and will go as far.

So it would be well if we should get back to the old fashion of having a few colonies of bees on every farm, especially if there are no other bees near. In one case only is it not advisable to keep bees. If someone within two miles makes a business of producing honey, keeping 50 or 100 colonies of bees, then you have no need of other bees to fertilize your blossoms, and it is the kind thing for you to leave to him the pasturage for his bees, out of which he may have his bread and butter.

There is a great difference as to pasturage for bees in different localities. In the north, white clover is perhaps the chief source, but some seasons it may bloom profusely and yield little or no nectar. The same thing is true of most honey plants. Although there is seldom any surplus honey obtained from fruit bloom, it is of prime importance, because used to rear the thousands of winged gatherers to work on the future harvest. So of dandelions. Linden, or basswood, yields more rapidly than any other northern plant, and is in some places the chief dependence. Buckwheat, especially in some seasons and some localities, yields, late in the season, large quantities of dark, inferior honey—although preferred by many. Many other plants yield honey, and the greater the variety in one place, the better.—Home and Farm.

SOME FACTS ABOUT BEES.

The honey bees are a brilliant illustration of the blessings bestowed by labor. It is their ability and willingness to work which makes them an example to everyone.

The young bee, as she issues from her cell, is a babylike creature but in a few days she is at the height of her strength and usefulness. She stays at home, as a rule, for about two weeks, and helps to do the housework of the hive, removing dead bees and foreign matter, attending the queen and feeding her, secreting wax, building comb, caring for the larvae and ventilating the hive.

When first hatched the bee appears to have no desire to collect honey; she must first serve her apprenticeship in the hive, before the desire awakens to go forth to the honey fields. When older she either joins the field force and collects honey or is detailed to do sentinel duty at the entrance of the hive to prevent any intrusion from other colonies.

Worker bees never sting a queen. When they desire to dispense with a royal personage, they politely but fatally cluster about her so closely that she is smothered to death.

When a swarm is put into a new hive their first care is to build comb.

When leaving their old home each bee filles her honey sac so as to be provided for the journey.

When the cells are finished and nearly filled with honey, they are allowed to remain open a few days that the extra water may evaporate and the honey be properly cured. They are then sealed or capped over with wax and the work is done. The wonderful regularity of the honeycomb is a beautiful tribute to the skill of the tiny worker, while its slight irregularities show it to be the work of intelligence rather than of an unreasoning machine.

Besides these there is one more cargo which the bees carry—it is called propolis. This is sticky—a resinous matter—and is used for the purpose of gluing shut all cracks and crevices in the hive. When bees cannot remove obstructions in the hive, they often cover them over with propolis.

The habits of the workers account for the cleanliness in the hive and for the exquisite purity of the honeycomb. —Selected from the Epitomist.

The Chinese claim to be the originators of the newspaper. The Imperial Gazette of Pekin is said to have been published for over 1,500 years, at the side of which modern papers are mere infants and bee papers, oh where are they?

THE PRODUCTION OF AMATEUR BEE-KEEPERS

A Pen Picture of the Apiarian Situation in California.

C. W. DAYTON.

THE RESOLUTION to regulate the production of amateur bee-keepers is a move in the right direction. Such resolution ought not to become necessary but perhaps it is better to have something which is only part bad than have something saddled upon us and our industry which is decidedly vicious. A few days ago I was wondering why the grocerymen could not get up some organizations and periodicals to entice every loose individual into keeping a store, by holding up all its shining sides and obscuring all its difficulties. Some real estate capitalist who has a lot of empty store buildings he would like to have occupied to engineer the scheme. But merchants seem to be of a riper class. If they have been sagacious enough to get sufficient funds together to establish such a business they probably penetrate blandishments that would entice them into any business, by gusto and exploitation.

Some twenty years ago when I went about the country to visit with other bee-keepers they always showed me their yellow striped queens and methods of rearing them. Urged me to sample and decide on the quality of their honey and took me into the house where there were many bee journals lying about of three or four different kinds and were specially interested in articles which they contained. Seldom, and I could not well go wrong if I say that there were no bee-keepers who did not read three or four papers on bee-keeping. Now times have changed. Not more than one in ten takes a paper and I doubt if that. Three in twenty here at Chatsworth and those subscriptions I obtained after years of induce-

Snap Shots in a California Apiary.

ment.

I do not know of a queen being reared by any special process, or a queen bought here last season, or, for several seasons, for that matter; and, when I go to their apiaries I know better than ask to sample their honey, and if I desire their very best friendship I should not enquire about literature but take it as granted that they are beyond the need of papers or books. Seven years ago I knew eleven bee-keepers in one locality, four of whom owned over 200 colonies each. I know them as well today and amongst the whole eleven there is not a single colony of bees. They dropped bees and went into any business which offered a chance to earn a living.

During the three or four years they bought about 1,200 hives and their bees consumed 150 tons of honey to live on and their owners did not get five tons to sell. Some of the remnants of apiaries were hauled down on the river, in the brush, where they were abandoned, to starve and when the farmers wanted hives to put swarms in they went down in the willows and picked them up for the "going after." But they were nearly all of the eight-frame size (in fact there were one or two outfits of six-frame size) and some of the farmers become suspicious that an eight-frame hive was too small and contracted for any purpose.

One scientific and experienced bee-keeper with 150 colonies, or two with 60 to 75 colonies each might have secured several fair crops in that location and kept the inhabitants thereabout educated and supplied so when a bountiful harvest came there would have remained considerable of a demand for honey. But it was a fitful harvest for the supply dealer. When at last they were obliged to neglect the bees they were allowed to sit out on narrow tracts or city lots and cluster upon the neighboring hydrants and wind-mill tanks and bother stock until they became a neighborhood nuisance and lawsuits were frequently threatened.

One bee-keeper came to hire me to divide his colonies. When I looked into the hives they would scarcely make decent sized nuclei. When I

In a California Canon.

would not touch such measly work he went on and divided them himself and he did not get $1 per hive in one of the best seasons. If the bees are handled right there will seldom be any over-stocking because. scientific management demands too close attention and too much attention to work on this spread-eagle fashion. This going in and dropping out and swooping down here or there is hawk like. There is no safety for anyone in market or in production. There is no profit in it and there never has been except in rare instances where the operator had a "pull" from some other quarter. There are too many who would sooner sell a car-load at a profit of ten dollars than to clear several hundred dollars from 50 colonies.

The honey resources of a locality belong to the people who occupy that locality and if there are outside locations there are plenty of young stock to emigrate there to found a home for themselves. Give the consumer the product of his own locality and it is an implement of friendship at once but anything from abroad is regarded with suspicion. And rightly it may be because this changeableness is what distracts persons from their better judgments which experience has formed. By it we are led away from "home" and robbed.

'Yes the boys should but they cannot stay on the farm. Those who say so talk for hire. The bee business of the neighborhood gobbled up; the fruit business gobbled up; the stock business gobbled up and the avenues of exchange manipulated by a gang of grabbers as soon as the boy begins to move, and, touch one of the lusty vultures if you dare! If there were a thousand good chances opened up there would be a sudden swooping down upon them by persons of means and influence, even though they were obliged to let their home farm stand idle in order to hold the outlying interests. "Stay on the farm?" As a general thing a boy is not very welcome on the farm unless he will be satisfied to put in many years of toil and drubbery as a hired hand for the old man, and the old man gloating over his ability to produce commodities by the carload while the same may actually fail to pay expenses; as I have seen many carloads of honey do here in California.

Chatsworth, California.

THE MASSACHUSETTS MEETING.

The Second Annual Convention and Exhibition of the Worcester County (Mass.) Bee-Keepers' Society although a thing of the past will long be remembered by those who participated, for its real enthusiasm and advanced thought. One gentleman who has attended many bee-keepers' assemblies both local and National remarked; "This is the best I ever attended. The stamp of the men is so different from what you find at most of such gatherings, they're brainy and progressive and the biased advice of the supply man is so well forced into the background. I wouldn't have missed this for many times what it cost me to get here." And similar comments were to be heard on all sides.

The exhibits of bee products were not as large as last year but considering the season the results were commendable. It is hoped that another year sufficient funds will be raised to enable the society to offer premiums sufficient to at least partially reimburse exhibitors for the outlay necessary in preparing and transporting material. Already some offerings have been made.

Among the notable persons present were Hon. J. Lewis Ellsworth, Secy. Massachusetts State Board of Agriculture, Prof. Brooks of Amherst, Mr. Crane, Mr. Alley, Mr. Latham, Mr. Jeffrey, Mr. Herbert Cary and Mr Ferry. Over fifty persons sat down to the banquet Saturday noon and the attendance at the various meetings tested the capacity of the hall. The addresses were notable for their presentation of new views of old subjects and for an almost entire absence of anything which savored of commercialism. The forenoons and intermissions were devoted to social talks and many an animated discussion could be heard. It was royal fun and not infrequently a liberal education to listen to a pair of veteran experts go at it; one would make an assertion, the other would controvert it, then the music began. Red hot would become the argument, facts in avalanches would be poured out to the utter confusion of the novices, but gradually the debate would simmer down until one or the other participant would gain the other's point of view. Perhaps each would be reaching the same results though holding different theories as to the causes but each wanted the truth and before they finished they generally agreed as to what that was.

We expected to give in this issue a digest of the more notable addresses and items of value to our readers but we find that it will not do to rush the matter as would be necessary to do that, so will defer until the November issue.

ERRONEOUS PRIMARY INSTRUCTIONS.

L. M. GULDEN.

IN THE DISSEMINATION of information relative to the honey bee, its natural history and products, where could a better beginning be made than in the primary public schools?

The introduction of interesting reading matter into our school readers and language books, would go a long way toward making this branch of agricultural pursuit popular and placing honey on an equality with butter and eggs as a staple diet and thus make our business very much more stable. It is not probable that this would tend to lower prices any more than a knowledge of the hen and cow tends to lower the prices on their products.

However there is a phase of this scheme of introducing such articles into the text books which will bear the strictest supervision. I refer to the mode of its introduction and the correctness of the information. Such matter can not help but strike deep into the immature and imaginative minds of children and will secure such a tenacious hold that no amount of subsequent literary information will be able to fully set aside the basic ideas inculcated at that period of life.

Erroneous ideas given at this time will, in the majority of cases, never be dispelled.

In the New Franklin Second Reader, by Loomis J. Campbell (Butler, Sheldon & Co., New York), I find this:

* * * "They fly away, and gather the sweet juice out of the flowers." "The bee has a long tongue which it thrusts into the flower , to suck up the juice." "Then it carries the juice to the hive, and makes it into honey."

* * * "The dust (pollen) they use to make wax; and with the wax they build a great many little cells."

Relative to the first part of this a pupil asked me, "Is that why the flowers dry up after the bees have visited them?" Further comment is unnecessary.

In Metcalf's Elementary English (American Book Co.) I find this:

"The worms that become queens are fed with a richer food than is given to the others." "Five days after they are hatched they spin cocoons, and in sixteen days more they come out perfect queen bees." "The workers and males have a slower growth."

And again without any preliminary qualification; "When the little queens are full grown, the old queen tries to kill them, for she is jealous and wants to reign alone." "Either they must be destroyed, or she must leave the hive with a part of the bees, to make another home." "But the workers keep watch, and do not let her come near the young queens until they are sure she doesn't mean to leave the hive." "In that case, she is allowed to sting and kill all the young females, or queens." "If however, she flies off, followed by many bees, a young queen is set free." "This queen usually departs with another swarm, as it is called, and the next one will do the same if the hive is still too large."

Is this orthodox teaching for children?

Osakis, Minn.

Prof. A. C. Miller, a member of the International Zoological Congress now in session in Boston, spent the afternoon with Mr. Adams at the Highlands. Mr. Miller's more recent studies of the hymenoptera will be published in 1908 by the State of Rhode Island. As editor of the American Bee-Keeper his investigations as to insect temperatures, which comprise some of the most patient and careful work since Huber, have already been given to the public.—Newburyport (Mass.) Daily News.

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In our September issue Mr. Geo. B. Howe said some pertinent things about breeding bees, and it will be worth your while to reread the article. Pedigreed queens are worth something; but where can you find half a dozen bee-keepers who can, with any degree of certainty, tell the pedigree of their stock? (M.)

A PRINTER'S ERROR.

In the September number, in an editorial on Misfit Apicultural Advice, I am made to say regarding full entrances for winter "one by one-half inches." Such an entrance used in connection with the tarred wrapping is ruinous. The passage should have read "fourteen by one-half inches." Where field or house mice are troublesome I guard such an entrance with coarse wire cloth, meshes of which will readily pass a bee. (M.)

FACTS VERSUS FICTION.

Not long ago Mr. G. M. Doolittle, the producer of queens "with umbilical cords," solemnly stated that a queen of pure parentage but mated to a drone of another race would produce impure drones. It would be amusing were it not pitiable to follow the absurdities put forward by him. Had he known anything about the real structure, growth and laws of bees he would at least have kept his mouth shut on the foregoing points. For the benefit of our readers, I, while in attendance at the recent International Zoological Congress, sought out some of the world's greatest authorities on parthenogenesis, particularly as found in the bee. They said that impurity to the drone offspring through the mating of the mother was utterly impossible. When ignorance is bliss it is folly to be wise, so let us not disturb the joys of the voluble purveyor of errors.

If you have a queen of pure ancestry but mismated, do not hesitate to rear drones from her, but look sharp that no queens are raised from her eggs, either in her own or some other hive. I say some other hive, because the shifting of combs so much practiced by followers of Mr. D., not infrequently results in losing sight of the origin of the eggs from which chance queens may be raised. And color of the offspring, either queen or worker, does not always tell the story as to purity or not. A hybrid queen mated to a pure drone of strong ancestry, particularly if of the "golden" type, sometimes produces bees which appear pure. If you are trying to improve your bees through breeding, be very sure of the stock you are using—and of whose advice you are following. Better doubt what is told you until you have proved it for yourself, unless it lies in a field beyond your abilities or training; in which case seek the best authorities to be found. (M.)

TARRED PAPER FOR WINTER.

Before adopting a method or practice study it, weigh it and see if you fully comprehend it and if it really is what it is represented. It seems almost incredible that supposedly thinking men will blindly follow any plan if it is only set forth by some favorite writer, or is catchily written up. In a recent number of The Review the editor referred to one extensive bee-keeper who had made a flat failure with tarred paper for spring protection. We wrote at once to the editor and said he would find on investigation that the man in question had used closely contracted entrances. Such proved to be the case, the entrance having been reduced to ⅞ by ¾. A careful perusal of the matter relating to the use of tarred paper, or a letter asking for all details and then a careful weighing of the same, instead of jumping blindly at the conclusion that the use of the paper without change of any other practice was all that was necessary, would have saved the man many dollars and probably some hard feelings. Dont jump at conclusions; only a genius can safely do that, and he sometimes misses. (M).

ADVOCATING OLD-FASHIONED METHODS.

How persistently some of the papers stick to the advocacy of the old, slow—hence expensive—methods of introducing queens by caging. The American Bee Journal in the September number has such an article, entitled "Improvement in Queen Introduction," the substance of which is to necessitate more handling and does not lessen the delay. Mr. Hutchinson and his brother have greatly lessened the lost time in caging methods by putting the queen alone, but with candy food, in a wire-cloth tube cage, the candy plugging the opening. The queen so caged is put in the hive immediately on removing the old queen. He reports success. Such a method is in some ways more rapid than the "Direct System" in which the queen fasts for twenty to thirty minutes and is then run in. It should be noted that Mr. H. always gives the new queen on removal of the old, and I believe he says that the plan is not sure if the colony has been long queenless, whereas by the direct system a queen can be given at any time. (M.)

JARRING BEES OFF THE COMBS.

A recent exposition by Dr. C. C. Miller of his method of bumping bees off of combs calls to mind the complaint of some beekeepers who used that or similar methods, to the effect that their queens were "going bad," that the brood was being put in very irregularly, old and young brood appearing in contiguous cells.

The trouble was readily pointed out. Severe or sudden jarring, while most effective in displacing the bees, is also effective in dislodging eggs, and usually the bees remove such eggs. The dislodgment is not likely to be noticed, and when the comb has been cleaned up the queen proceeds in the course of events to fill the vacancies, and on a later inspection the keeper discovers what he believes to be evidence of a failing queen.

There is a safe and happy medium in the "bumping" method which can only be learned by experience, and the hurried or careless man and the novice had better use some other way of ridding combs of bees. Bees "hang" on the combs, that is to say they literally support themselves by the claws of those feet which are uppermost, and while the claws of the other feet may assist some the result is the same, a bee hung up on hooks. Turn a hook over and what is on it usually drops off, so turn the comb quickly, end or bottom up, and at once give it a quick shake or a "safe" jolt and presto the bulk of the bees are off. (M.)

THE STUPIDITY OF BEES.

One Apiarist Thinks They Show Feeble Brain Power.

(Louis Rhead, in The Outlook)

IT would be foolish to deny that honey bees show many qualities of a high order of instinct, but they also show, in a great many instances a remarkable degree of stupidity. Yet for centuries poets and writers have held them up as paragons of wisdom. Maurice Maeterlinck, in his most poetical description of the nuptial flight of the queen bee and the dramatic death of the favorite lover, is one instance. On the other hand, Sir John Lubbock, in his "Ants, Bees and Wasps," dismisses the honey bee with little ceremony, finding it infinitely less interesting and intelligent than the ant. There is no question that the ant at every turn outwits the bee in its home by stealing its hard-earned store. In fact, so numerous are the enemies of bees that it is no wonder that they are supplied by nature with means to resist and even to attack the thieves who wish to take their earnings.

First comes the bee moth, whose caterpillar bores through the comb; then the ant, the spider and the wild bumblebee. The caterpillar of the bee moth bores and destroys the comb; the spider kills the bees and sucks their blood, and the ant, the wild bumblebee and various flies steal the honey. These enemies hover about and commit their depredations near the hive, and were it not for the extraordinary fecundity of the queen mother the bees' struggle for existence would soon cease.

One would naturally conclude that so bold a creature would have the faculty of resisting its numerous small enemies, but, in fact, it is exactly the opposite. The bee seems paralyzed by a spider. Although its vision and scent are so keen that it cannot fail to see a spider busily working and weaving its web right in front of the mouth of the hive, yet one after another will fly right into the web, to sure death. One of the bee-keeper's constant duties is to clear spiders away from the vicinity of the hive, especially from the entrance.

In front of one of my hives I grew a Japanese iris. On this the spiders would string their web, carrying it to the hive so that one out of every twenty bees emerging and entering would be captured. In every instance where I have watched a bee entangled in the web its first and only object was to free itself. While it is struggling the spider winds it securely, and not till this is done does he use his nippers to draw blood; the struggle gets fainter ; still the bee, equal or superior in size and strength, has opportunity to sting, but does not, but simply makes all effort possible to get free.

With ants the case is different, because they invariably enter the hive, and, as they are unable to fly, the bee has the advantage of being able to pounce upon them and hold them down. Last winter a colony of ants made their way into the hive by boring through a crevice in the footboard, which was old and comparatively rotten. During the fall they bored passages in all directions, and there located their colony, and at intervals climbed up to the cells, stealing the honey and depositing it for future use. In midwinter the bees usually come out of the hives from time to time. But from this hive no bees appeared. I was somewhat surprised that four colonies came out of the hives and one did not. On lifting the top I found the combs covered with the entire colony, and every one stone dead—forty thousand bees motionless, their bodies shining as naturally as in life. I lifted the frames out to make an examination, and in so doing lifted the body of the hive from the footboard. This disclosed a large and numerous colony of ants in a semi-dormant condition, with a plentiful supply of honey in their quarters. I came to the conclusion that the ants had stolen every particle of the bees' winter food and the bees were consequently starved to death.

The question arises, "Why are not bees endowed with instinct to destroy so persistent an enemy?" They have the same sense of smell and the same sense of sight as the ant, yet in this instance probably months of depredations on their hard-earned stores went serenely on without any effort to stop it. The average number of bees in a healthy hive is about sixty thousand, yet I venture to believe that eighty per cent in one year come to an untimely end.

Again, on bright days during the winter they will issue forth. No matter if the snow is on the ground and the air is chilly, if only the sun shines they will fly around. I have seen them on these occasions fly for a few moments and then drop helplessly on the snow, and after a time, for a space of a few yards around the hive, they lie so thick that the snow is hidden. On these occasions the bee-keeper will often lose from fifty to one hundred thousand bees. The question may well be asked, "Why does the bee not know, not have instinct enough to know, that the temperature is lower than he can bear?" Some bee-keepers say they would die anyhow; but that is no reason, for in summer they fan to keep cool, and in winter fan to keep warm, and they would succeed in weathering the winter's cold if they kept in their hive. Another instance may be mentioned of what I call bee stupidity. I had about a pint of sour honey which had run from the unsealed combs, and placed it in a flat plate before the hives for the bees to remake. In ten minutes the first bee got on the plate, took a few sips and left. Shortly after others followed. In the space of twenty minutes I counted eighteen ants and nine flies—two of the large bluebottle variety, the remainder being different kinds of small wasps—and forty hive bees. I had been careful to place small chips of wood for the bees to alight on while floating in the sticky mass, yet every one of the forty bees floundered in up to their eyes in the liquid sweet. On removing three of the live ones to the edge of the plate they promptly struggled back, refusing the opportunity to crawl through the grass to clear their bodies and get their wings dry to enable them to carry their honey to the hive. On the other hand, the flies and ants carefully stood on the edge of the honey—the ants in a perfect row, equally distant from each other, with not even their feet soiled; but when gorged to the limit of safety, away they would go and soon return for a fresh supply.

The oft-repeated praise of the tender solicitude of the nurse and doctor bees seem in striking contrast with the callous movements of healthy bees who pass by their dead or wounded sisters without the slightest notice, but will quickly remove them if work is impeded, taking no end of trouble to pick the body up, fly some distance and then drop it. A single bee may be seen tugging and pulling, the rest working merrily on, taking no notice whatever nor giving assistance; yet in the hive comb building every one helps his neighbor in building a cell. The same thing applies to a bee struggling in a spider's web. The strength of a union of twelve bees flying with savage force against the fragile web would at once set a prisoner free; yet, while they are indifferent to their comrade's trouble, if a young terrier pup ventures within a yard or so of the hive, a dozen bees are on him like a flash, and with unerring judgment they know his tender spots.

Many minor things might be mentioned to show that the honey bee is not only stupid, but more so than the average insect with which it comes in contact, although it is admittedly a wonderful creature in many ways. If it were not for its sweet and toothsome honey, we should have no more respect and affection for it than for the common hornet.

BEES DEPOSITING NECTAR IN THE HIVE.

Nature Fakers of Beedom.

A. C. MILLER.

IN THE AMERICAN BEE JOURNAL for September, Mr. G. M. Doolittle takes three columns to say that field bees never deposit their load of nectar in the cells, but turn them all over to the field bees. The essence of the article lies in the following quotation: "I have stood, sat and lain by the side of an observation hive for minutes and hours, till these will count into days, and I never yet saw a single bee coming in from the fields with a load of nectar, deposit the same in the cells of the comb. The loaded field bee seeks out a young bee—one less than sixteen days old, or those which do the work inside of the hive when a colony is in normal condition, and the load of nectar is given to this inside worker and the sac of this worker holds that nectar until it is sufficiently evaporated for depositing in the cells, unless more comes in from the fields than the sacs of the workers can contain. When this happens then this thin nectar is deposited in the cells, generally in those scattered about amongst the brood, so far as they will hold it, as the nurse bees use this thin nectar or honey in preparing the chyle for the larvae. If the vacant cells in the brood nest will not hold the surplus nectar, above what the sacs of the inside workers can contain, then these inside workers deposit it anywhere that vacant cells not containing evaporated nectar (or what has now become honey) can be found."

I quote him literally that I may the more perfectly show the errors he makes. I wish to show these so that beginners will realize just how unreliable a guide he is, and thereby avoid the losses so many have incurred by trying to follow him. I do not mean to infer that Mr. Doolittle is not sincere in his beliefs, but I do assert that he is absolutely wrong in many of the things he says about bees; and I expect to show it here as I have shown it to scores of persons studying the bees in hives. In behalf of Mr. D. it may be said that he has never had an observation hive that would make visible more than a fraction of what transpires within a colony of bees; and, furthermore, he says he has lain long beside observation hives, a position which, I would remind him, is more productive of increased bodily than of mental weight. A certain good old professor always used to tell his students to sit in the hardest chair they could find, when studying, and it was said that he could judge of a student by the wear of his clothes.

Let us analyze the quotation given above and at the same time compare it with some of Mr. D.'s statements made at other times and with facts as any interested person may see them in the hive. First he says the loaded field bee seeks out a young

Characteristic California Bee Camp.

bee, one less than sixteen days old, then he hedges and says one of those "which do the work inside the hive when the colony is in normal condition." I presume by "normal condition" he means a colony with a fertile queen and brood in all stages. A colony hopelessly queenless he would probably term abnormal and yet it frequently occurs in nature. In the latter colonies where we often find all the bees over two months old, I would ask to whom the field bees give their loads. It should be understood that if bees regularly and normally give their loads to inside workers—under sixteen days old, Mr. D. says—such field bees will not give up the habit if there are no such bees to receive it, but perforce, not having a normal instinct to do otherwise, must hold the loads in their sacs, which same they do not do. Now in these same queenless and broodless colonies all the bees are physiologically field bees, and actually we find on opening such a colony at midday during a good flow almost all the bees afield, scarce enough behind to guard the entrance. Yet they store a goodly lot.

Next he says the sac of the inside worker holds the nectar until it is sufficiently evaporated for depositing in the cells. Elsewhere he has said that such bees do the "evaporating" by "pumping the nectar back and forth on their tongues." His two statements do not coincide, and, in fact, both are wrong.

He says the nurse bees use this thin nectar in preparing chyle. Not at all improbable, but from the form of his statement we must infer that he considers it a sine qua non of brood food. How about midwinter brood rearing when neither nectar nor water are to be had? Further on he says, "then these inside workers deposit the nectar anywhere that vacant cells not containing evaporated nectar (or what has now become honey) can be found." Naturally a cell to be vacant must contain nothing; but, however, what he means, if his words mean anything, is that bees never put nectar or unripe honey in cells containing ripe honey. The error of such a statement may readily be seen when bees are storing nectar from a light source in combs containing dark honey, or vice versa.

To show that he does not know when bees are depositing in the cells we have only to cite his statement that bees put honey or nectar in the cells by slowly licking over the inner surface of the cells, during which operation the honey or nectar flows from the tongue. Utterly wrong. The tongue never so acts, nor can it. An extended tongue is always a taking or seeking tongue. What he saw was bees taking honey, not depositing it. In this connection it should be recalled that Mr. D. says bees give food on their tongues, and he frequently speaks of bees holding out their tongues offering food to queens, and he affirms that when bees are thus "offering food to a caged queen" they are friendly disposed toward her. Now bees do not, and cannot, so give food of any kind, and if he has seen field bees holding out their tongues to inside workers, he has seen field bees seeking food of some sort.

Further on in his article Mr. D. says he has seen nectar deposited in a comb standing outside of a hive. Of course we are expected to believe that the inside workers did that!

Providence, R. I., Sept. 11, 1907.

ADVERTISING THE APIARY.

J. J. WILDER.

EVERY progressive or modern apiary should have a name, and it painted in large letters. Also, the name of the owner in full and where to locate him most of the time. Same should be erected near the apiary or roadside. Also, a blackboard should be kept at same place stating thereon what you may have to sell, with prices, and where it can be obtained. It is not enough to have the apiary in good appearance; its name and yours should be there for every passerby to know.

This would be a business advertisement at home, and there are always strangers passing over the country—some perhaps who have never seen a modern apiary, and it would be an interesting object to them, and many would take the name of the apiary and apiarist and give it to others as they go from place to place, thus advertising your business.

I often receive orders from parties who must have got my name in this way. I very often meet traveling people who have seen attractive apiaries in different sections of the country, but could give no names, and they would interest me for some time telling what they saw and what they thought about it, and I would have been glad to have gotten the parties' names. Traveling people always have something interesting to tell of what they have seen, and they are most in contact with business people, and our names and business should be known to them.

Permit me to say also that bee-keepers should use printed letter-heads. You are a bee-keeper, but you should have printed letter-heads as well as any other business man.

Cordele, Ga.

DUEL IN THE AIR.

Fierce Fight Between a Hornet, a Bumblebee and a Sparrow.

(From the Detroit Free Press.)

"The fiercest fight I ever saw took place in the air. The combatants were a hornet, a bumblebee and a sparrow. All The Hagues in history couldn't have stopped it.

"I was on the porch of my house, chinking up for summer, when the hornet came along," continued the narrator, who saw that he was expected to make good his statement. "He was building a nest there, and I watched him on several trips carrying material.

"A few minutes later a bumblebee of unusual size and brilliant color took a buzz about the premises. His buzz was deep toned and earnest.

"I'm an out-o'-door man, and I have always noticed that head-on collisions between aerial navigators are almost unknown. I wonder that humans haven't imitated these flyers more than they have in this respect.

"I was surprised, however, to see that in the case I am telling you about the hornet and the bumblebee dodged each other several times. That's what made me quit my own job and take notice. I soon discovered that the bumblebee was intent upon invading the nest of the hornet, but only when the hornet was absent.

"The bumbler was evidently on the lookout, for as soon as the hornet showed up he flew in another direction. No sooner did the hornet finish and fly away than the bumblebee sailed back with a biff from his lurking place.

"He returned once too often, or, rather, he tarried too long on his last visit. As he quit the hornet's nest the hornet gave him a bat that sounded like the explosion of a percussion cap. It made my blood tingle.

"They were together quicker than a wink, up and down, butting, backing out, and coming together again, until both dropped to the floor of my porch. They clinched, or seemed to. They fairly rolled together.

"Then they rose in the air. The hornet gave chase until he bore down on the bee. The bee turned like a hawk and met his pursuer. The hornet ducked. Then they got together again, and again it was an up-and-down affair, which for dexterous dodging and biffing and batting surpassed anything I ever saw in the ring.

"While they were at it, along comes an English sparrow. He had a bit of rag or wisp or something whose weight was testing his strength. It trailed in the wake of the bird, and the lower end of it came in contact with the hornet and the bee. And in some way the sparrow lost his clutch.

"Instantly the sparrow darted downward to recover the wisp. The sparrow is a fool, but a fighter. This bird made a dip for the wisp and came between the fighters. For a second he fluttered as if he had been shot. In less than a second the plucky bird recovered, and made another attempt to get his property.

"For an instant there was a fast, fractious and fierce commingling of the three. The last round had come.

"The bumblebee fell to the earth, pursued by the sparrow. They hit the dust together. At the same instant the hornet went off in a zigzag direction. I lost sight of him and went to the contest between the bee and the sparrow.

"The bee was dead. He had been literally pecked to strings. The sparrow, swollen to twice his normal size, was helpless. He fluttered feebly and expired. He had been stung to death.

"I returned to my porch and waited. Nearly an hour elapsed when I saw the hornet come back. He fell in his effort to fly. Finally he crawled across the floor, climbing up the side of the house feebly and reached his nest.

"He never came out. When I thought it safe to do so, I mounted my stepladder and carefully examined the nest through a magnifying glass. The hornet was dead. So all three fighters were accounted for."

REPORT OF THE COLORADO STATE BEE-KEEPERS' CONVENTION.

CONTINUED FROM LAST MONTH.

Question 4: How much does it cost to produce one pound of comb honey on an average of 40 pounds per colony?

Mr. H. Crawford: It looks to me like that would take a good deal of figuring on a forty pound lot. I produced 27,000 pounds of honey this year with the expense of $700.00 for labor and supplies, that was not counting hives and was not counting my own work.

Mr. Porter: I think this question is of a good deal of importance. I know it is a hard proposition what a pound of honey has cost the bee-keeper. You have to take about ten years to do it, a man has got to figure in his salary for ten years, figure up his expenses, this is the correct way to do it.

Mr. H. Rauchfuss: I think it best to let this question drop and let it come up to-morrow and let them do some figuring.

Mr. Collins: To average 35 or 40 pounds we must have a good year, think 35 pounds would be a good deal to average year in and year out.

Mr. O. Foster: I could not give any figures for this past year, my work has been largely experimental.

Mr. Collins: For the past ten years my average has not been over 40 pounds, I have not had an average of ten cents per pound, not counting my own work.

Question 5: What is the best method of finding queen cells during the swarming time?

Mr. Wilson: I don't know as I can give anything new on that. I open a hive use little smoke take out the follower and generally the first comb I hardly ever look at. I look at the second comb and put it back and the next one, etc. This is about all there is to it. If the bees are on the comb I usually shake them off but hardly ever have any trouble in finding queen cells and have no trouble in missing one.

Mr. Gill: In searching for queen cells I also require my help to look after every colony. He has to look into the top, I think I can look over two swarms while they are looking over one. I want my bottom boards fastened. It takes a quite experienced hand to take up a frame and determine whether a queen cell will materialize or not. There is a larger percent. than very many bee-keepers think there are.

Mr. Collins: I never cut out queen cells and kill the old queen. I have this year had a good flow of honey and got my foul brood off and have everything in fine shape; if a queen is past two years old or if she is not doing first class work, I dispose of her, she may be doing first class work, and is doing good work that is no sign that she is a good queen, I will dispose of her also, that is after superseding.

Mr. Gill: In going over the swarms I cut out queen cells to prevent swarming I don't allow any swarms at all. I aim to discourage. I found 25 per cent. of those that I discouraged had gone to work again. I find that they have gone back and supplying cells again. I don't think that I lost much money by it and I have not had 1st. swarms in the last three years, and it gives me more honey than I had. There is a proof indicating here and there that supersedure cells would not come if they had a perfect queen. The natural cells are usually long and on edge of comb and bottom and there is not such a difference in age, in superseding two or three cells are sometims found only. I can tell that this is a natural condition if the swarm is superseding.

Mr. H. Rauchfuss: It is very often you will find a young queen is superseded.

Evening Session.

Report of the Bee-Inspector of Adams County.

Report: Number colonies examined, 1682; number colonies inspected, 572; number colonies diseased, 31; number colonies transferred, 13; number colonies burned, 18; amount received, fees and expenses, $107.50.

Motion made and carried that report be received and filed.

Question Box: Question 1: What

is a successful method for handling foul brood?

Mr. R. Miller: We have a disease in our part of the country as near as I understand it, the black brood. I saw in one of the bee journals that the English foul brood is the same as the American black blood in this country, it is not pickled brood.

Mr. H. Rauchfuss: What does it look like, and how does it act?

Mr. R. Miller: Dead brood stands up and it does not act like foul brood; most of it is dead before it is capped.

Mr. Crawford: I never heard of any black brood in this state.

Mr. Jouno: I asked that question down at the National meeting and the professor said that samples were sent him but he could not call it black brood. That there was no black brood in Colorado, none west of Missouri river.

Mr. H. Rauchfuss: Mr. Thompson took some of this black brood and cut it out and sent it to Mr. Howard who is the first one who discovered black brood, and he pronounced it black brood and nothing else and I believe we have had it in this state for a good many years. It is a different shape from the foul brood. We have had considerable expense with it, we have "shook" some and we have left some alone, although it did not get along as well as the others. It is really worse than foul brood, for sometimes it will attack any colony in the yard; we have found that 20 to 25 per cent. of the brood died in the yard. Sometimes it will cure itself. It comes in the time of the year when we need our bees the most, April, May and June. At other times we find that it is not nearly as plentiful as in the spring and there have been several theories how to cure it. About the method of treating foul brood. We don't shake any. Whenever we find foul brood we double up the foul brood colonies, sometimes putting three or four colonies together, kill the queens and leave one queen in th lower story, let them store all the honey they can and kill off remainder of bees at end of the season.

Mr. R. Miller: They sent this diseased brood to Mr. Howard and he diagnosed it as foul brood. There is a difference between the black brood and foul brood.

Mr. H. Rauchfuss: I would rather have foul brood than have black brood, and black brood is something we know very little about.

Mr. Jouno: The black brood is now pronounced the European foul brood, by a professor from Washington. The foul brood we have is American foul brood. Prof. Philips says it was not the black brood but another kind. Prof. White says we have no black brood in Colorado. The germs of this black brood was the same as foul brood but I know, as Mr. Rauchfuss says, that I would rather have foul brood as we know how to handle that.

Mr. Wilson: I would like to ask Mr. H. Rauchfuss a question, he says that the black brood disappears, does it occur again?

Mr. H. Rauchfuss: Not necessarily, it is likely not to appear again, in some of those that we shook it seemed to reappear and those we did not shake never had any.

Mr. Wilson: How does it differ from pickled brood? I have pickled brood in several hives.

Mr. H. Rauchfuss: The color is of slate color stands out as foul brood but not so much, it is not as heavy, it does not break down; foul brood runs together and dissolves in liquid, black brood hangs together and does not run out.

Mr. Bolinger: About ten or twelve years ago I never saw foul brood and I never read much about it. I asked Mr. F. Rauchfuss to come out and see my bees, he told me that it was not foul brood but called it pickled or chilled brood.

Mr. Porter: I have had a good deal of trouble with this. Ten years it has been troubling some yards it seems, along May or first of June. This year I have scarcely any. I fed my bees granulated sugar, I don't know whether that had something to do with it or not.

Mr. H. Rauchfuss: As I stated before we found it in one colony, so it is brought from one yard to another, out of 15 or 20 yards.

Mr. Collins: I called Mr. A. M. Foster in to see what it was in my yards. It was pronounced chilled brood, it was rather early in May, he accused me of having my hives open but a few days later I had opened a chaff hive that had not been examined before and it was the worst bunch I had in the whole apiary. I never had any great percentage killed with it.

Mr. Crawford: This black brood is a new name to me and I always consider it pickled brood. Larva was poisoned by some food. I don't believe that any colony died out with pickled brood.

Mr. Jouno: About ten years ago the disease, black brood, was around here in localities, in fact all over. I found it in our bees that we were never able to get any surplus of comb honey.

Mr. Tomlin: Last two years Prof. Philips declares that it is foul brood.

Mr. H. Rauchfuss: Whenever we find any we start one yard with nothing but black brood, then we shake them off, and then take the combs and melt them down, and leave the colony queenless, or I would have a queen excluder on the lower one so as to keep the queen below. I thought maybe in this way we could fight it.

Mr. Bolinger: I thought that we had foul brood, I put them in another yard and found they had about the some thing, in two weeks they seemed to be not so bad. Never lost more than 10 per cent. of the brood with it.

Mr. Crawford: I believe it is more serious perhaps with them than it is with us. It entirely disappears.

Mr. Bolinger: The time that I got it, I could not find it in any other yards.

Question 2: Is there a better method of fastening foundation starters in brood frames than with wooden wedge?

Mr. H. Rauchfuss: To put glue on the wedge where we put a cleat on one side and have glue on that side, we stick it in there and we have a cleat where we push it down. For my part, I would just as soon have it full and start the foundation right up against it.

Mr. O. Foster: I had a good many to melt, the foul brood combs that I bought. The wedge would slip out and some were lost.

Mr. Porter: We want the brood frames plain without grooves. I take a strip of tin and pound it over to make a handle, then I make a groove in the tin, shove this into the wax, wax in a kettle on an oil stove, if it is too cold it will peal off the wood. Just the right temperature. Then take this and scoop up your wax then pour it along and turn it so as to let it run down from top to bottom, down the frame.

Mr. H. Rauchfuss: I have taken a piece of tubing to hold melted wax and drop that into the wax. This is a convenient way of handling.

Mr. Pease: Do you use metal tubing, what size about?

Mr. Rauchfuss: Any size, not too large.

Mr. Foster: These tubes are listed in catalogues of bee supplies.

Question 3: What is the cause of granulation of some comb honey soon after being stored?

Mr. H. Rauchfuss: I don't know but I wish I did know, we might be able to stop granulation if we knew what starts it.

Mr. Miller: One reason it granulates soon, it might not be well ripened.

Mr. Foster: I think it depends entirely upon source from which it is collected. We know that alfalfa honey does not granulate soon.

H. Rauchfuss: I have some comb honey that is six years old, that has not granulated yet.

Mr. Collins: Take granulated honey and melt it up, does it not show in the strained honey a poor quality.

Mr. H. Rauchfuss: This was white, but is not white any more, but I have some extracted honey that is 15 or 16 years old, never was heated, and has granulated and liquefied and granulated again, was white but very dark now.

Question 4: How much honey is consumed in wintering a hive of bees?

H. Rauchfuss: It depends where you have your bees. If you put your bees in a cellar and have the right temperature it will not take more than five pounds. In April I have taken them out and weighed them again and they averaged five pounds less. The more bees the more honey they use. I have had a two-story eight-frame hive solid with honey and I believe they would have used more if they had it.

Question 5: Does it pay the Apiarist in Colorado to bury his bees and if so what are the advantages he will gain?

H. Rauchfuss: It all depends upon how many bees they have. I have dug a trench where I could put in two hives side by side and then I covered them with loose dirt about 18 inches to two feet. Did not lose any of them, came out strong and used very little honey. One year we put some bees in a cellar that came from other locations, I moved those bees to a cleome location and they gave a big surplus. However, those that had cleome ran out of the hives and died. I saw they were going out of the cellar and they all went, did not save any. It does depend upon the kind of stores they have in the hive.

Mr. Foster: I always buried my bees in bunches of eight with two entrances on each side of the bunch and cover them with 6 or 8 inches of straw. I think we ought to give the bees a chance to fly when it is warm. I think it would be best to have them fly when they can, but I believe some bees need some protection here. I noticed in buying bees last season, for those hard cold winds in the fall the hive and the entrances should be in such a way so they would not get the benefit of it. This year I have them bunched together with four entrances on each four sides. This year I have some sheet iron covers just large enough to cover a bunch of eight colonies to project two inches, no protection whatever on side and the hives fit snugly together and they are put together in such a way that there must be ventilation, and by covering them up heavily with straw and pressed down as tight as possible, there is very little effect from the snow and protects them from the wind and I think it is an advantage. The bees were very weak when I put them in and light in stores, although I would like to have the entrances left open wide, whether they will stand this cold wind.

Mr. Jouno: Last year we had occasion to move our bees and we moved 300 colonies. I put a number of gunnysacks, around them. I simply shoved rags in tight, but the 16 we forgot to open have no entrance and came out in good shape.

Mr. H. Rauchfuss: If you have sufficient packing I have seen bees stronger with 5 inch packing all around except on the bottom and every one of them that had a tight cover were dead.

Mr. Porter: Take some seasons that may be alright. This cold would penetrate through the whole thing. I have five in chaff hives. I was experimenting to see how they would do and in a number of yards it was impossible, and had some in cracker boxes stuffed with burlap. They would be the very best bees I had.

Question 6: What method do you prefer for introducing queens received by mail?

Mr. O. Foster: This spring I bought over 100 queens, introduced them according to instructions, I used to introduce queens by my own method so I did the way it was described. Well, I had a surprise, I could not introduce those queens within ten days or two weeks. They produced fertile workers.

H. Rauchfuss: A great deal better way is to find your old queen and kill her, shake your bees, put an empty hive in the place of the old one, shake all the bees off the combs in front of the hive, put the old combs back into the new hive take your queen and dip her into diluted honey and let her run in amongst the bees and very few queens you will lose. We don't want any queenless colonies in May or July.

Question 7: What is the best method of manipulating supers in a moderate honey flow when working for comb honey?

H. Rauchfuss: Put the supers on top.

Mr. Miller: Always on top in my country, never on bottom.

Question 8: Will candied honey bricks laid on top of frames do for spring feeding?

Mr. O. Foster: Never tried that but think most of the granulated honey would become soft and would run down.

Mr. R. Miller: Probably on strong

colonies would do but think it would not do on weak colonies.

Mr. H. Rauchfuss: Think a strong colony can handle most anything candied or liquid.

Mr. Collins: Last spring I had a very few strong colonies that got through, had honey candied hard, have very best results. Had very little candied honey on bottom of hive.

Mr. Porter: I had considerable experience along that line and a few years ago had a great deal of candied honey in brood combs. We filled them with water and it would take about 48 hours for the honey to dissolve much.

Question 9: How can an appetite for honey best be cultivated among people who are not in the habit of using it?

Mr. Collins: As a man said in this afternoon's session, that to have an exhibition hive and teach the children of the different schools about them would enlarge the sale of honey.

Mr. Francis: I think it would be a good plan.

Mr. O. Foster: It appears to me that might create an appetite for keeping bees instead of using honey.

Mr. Francis: I read in a paper that honey was better for people than meat.

Mr. R. Miller: I found that in my experience there are a great many people that like honey and it is useless to talk to them to make them believe they don't, and if you can get a few people to using it and others find out it is good it will increase the sale of honey. The first honey experience I had there, was a bee-keeper sent several cases of comb honey there to be sold and disposed of very small amount and the rest of it was taken back home. There is a great deal more honey used there now and I don't hear the question so much as at first. "do you know it is honey and good." In that way it does create a demand for the honey by having it there so they know what it is.

Mr. Bolinger: I think that this pure food law to be a great benefit to our Colorado honey. I sent some honey to Pennsylvania and they wrote back that you agreed to send us honey and we took you to be an honest man and they could not understand why you sent that stuff. My idea of the reason for this is that the honey is adulterated and is called pure.

Mr. Francis: Mr. Rauchfuss and I had honey at the State Fair, I had a block of candied honey which I cut out of a five gallon can. The people did not know that it was honey in that form and thought it might be adulterated honey.

Second Day—First Session.

Contestants in the section contest were: Mr. Tomlin, Mr. Chas. Adams, Mr. Francis, Mr. Collins and Mrs. Gill:

Mr. Tomlin to put foundation in sections, using Daisy foundation fastener; Mr. Chas. Adams, folding sections, using Hubbard section press. Mr. Collins, Mr. Francis and Mrs. Gill using Rauchfuss combined section press and foundation fastener.

Wetting of sections: Wedge up the bundle of 500 sections before running the water into the grooves.

Mr. Collins: You will notice that I only take one quart of water both ways.

Mr. Gill: One pint of tepid water will be sufficient to moisten 500 sections.

Mr. Collins: Do you wet them a few hours ahead and leave them that way until you get ready for putting up sections?

Mr. Gill: To do this a day before and fix the 500 sections to put them up, by the time you get ready to use them you will have to wet them again, do everything when it is the right time to do it and use very little water.

Mr. Porter: I agree with Mr. Gill, that if they are wet too long, the groove has a chance to swell more and wood becomes brittle.

Mr. Tomlin: I went to a place to put up sections, this last summer, they were stored in a cellar and was not wet at all, it was not very damp, not too damp.

Mr. Gill: I want to advise everybody to keep their sections in as dry a room as possible. Do not put them up in a damp place.

Mr. H. Rauchfuss: If you have them in a cellar they get very damp and you will find them covered with mildew. Have sections dry as you can get them, and wet them just before using.

Report of Committee on award of section contest.

We, the committee on section contest, would make the following report: That there be two prizes namely: A first prize of two dollars ($2.00), a second prize of one dollar ($1.00).

Respectfully submitted, R. H. Rhodes, A. F. Foster, D. Moon.

Mr. Collins: As to the cutting of foundation, is it advisable to use starch on the knife or hot water?

Mr. Wilson: I have always used soap and water.

Mrs. Gill: We heat the knife and we find better work. We have tried soap, water and starch and like the heated knife better.

Mr. Pease: If the knife is drawn very rapidly through the foundation it does not require anything. I have used a thin sharp knife.

Mr. Collins: I will say that I have cut wax in the month of June and used hot water, have water standing over a small kerosene oil stove and just chuck my knife in quickly and cut right through foundation. Do not stop to let it melt, I usually only cut once.

Question: Why do bees put darker cappings on bait sections and also on adjoining sections?

Mr. Collins: If the bases are absolutely white, and the comb is white, has not been stained at all, they will cap white.

Mr. Steele: You say that if the sections are white and the cappings also, suppose the section is unsoiled why do they cap it dark?

Mr. Collins: They carry the brood comb on to it.

Mr. Steele: Why don't they cap all their sections white, if we believe, that, if the sections are white they cap it white.

Mr. Foster: I hardly think the color of the inside fixtures has anything to do with the whiteness of the comb. I think it is a great deal due to the fact that they get out of wax and scraps in order to get a little more wax. You will find a great deal of that comb very dark color from the hatching brood on the cappings of the sections.

Mr. Gill: Most every one has seen the combs by the side of the hives. I believe it is the locality largely due to this.

Mr. F. Rauchfuss: I can confirm that fully, the honey that is being produced in the city limits is not as attractive in color nor the cappings of the comb, it partly is due to the soot outside on the flowers.

Mr. Porter: I had an experience. I had a piece of awning cloth that was blue and white, so thin and worn that the bees chewed it up very easy, the cappings on that honey was blue.

Mr. F. Rauchfuss: Want to bring a question up regarding the work of the committee that has been appointed to consult the government about a mating yard in an isolated locality, in this state. As the question has been left the committee has no instructions whatever what the members of the association would do to help along with the matter. It would be necessary that we show them what we are willing to do in the matter before we ask them to do something and we would like to hear from the members present in regard to this matter.

Mr. Collins: Why I don't know what we could promise to do, I would agree to promise to furnish bees from my own yard and make the test.

Mr. V. Devinney: In addition to that, all we ask of the government is that they will co-operate with us and we will co-operate with them. Consequently we ask them and we are limited in our plans to do anything and the committee is to notify us what they wish us to do.

Mr. F. Rauchfuss: My purpose of bringing up the question was to find out whether there would be a sufficient supply in furnishing colonies, of queens and drones for this purpose.

Mr. Foster: It appears to me that if the government gets the station in running order there will be no worry about the supply for there will be many more applicants for their service.

Mr. F. Rauchfuss: It is a reasonable thing to ask of the government and the government will be glad to help us.

(To Be Continued).

THE BEE-KEEPING WORLD

Staff Contributors: F. Greiner, Adrian Getaz

Contributions to this department are solicited from all quarters of the earth

GERMANY.

According to the investigation by Dr. M. Kuckuck, all the eggs laid by a normal queen bee contain sperm, or are fertilized. It will be remembered that F. Dickel championed this theory for a term of years, and it is owing to his agitation that scientists have again taken up the matter of "parthenogenesis," which had been laid "ad acta" since Prof. Siebold. A great deal has been said pro and con during the last few years on the subject. Dickel gave his theory and actual observations at the hive. There seemed to be a disagreement which now seems to vanish. Dr. Kuckuck speaks of his investigations in Leipz. Bztg. but gives no particulars.

It is still adhered to in Germany that the only safe way of curing foul brood is the destruction of infested hives, bees, brood and all. Neumann, in Leipz. Bztg., gives the American method of treating the disease, not with the intention that it should be followed, but to show that there is no sure cure by such a treatment. He considers it very natural that bee-keepers here are trying to save all they can, as, although the states demand that foul brood must be wiped out, they pay no damages to the losers. Neumann also states that Schirach advocated the starving cure over a hundred years ago.

No honest bee-keeper ought to feed sugar for the purpose of increasing his honey crop, for sugar is not honey and can never be transformed into such.—Leipz. Bztg.

The British Bee Journal mentions the fact that St. Augustin, Bishop of Nippo, in his work "De Bono Congali," over 1500 years ago, writes that the honey bee is capable to reproduce without sexual contact.

N. Ludwig describes several methods of uniting bees in the fall (Leipz. Bztg.) but says that the old-time practice of stupifying the bees with puffball or some other material is still largely in vogue and is one involving the least trouble.

For feeding purposes Ludwig thinks that sugar syrup need not be boiled at all; simply hot water stirred into the sugar till all is dissolved. Many bee-keepers in Germany (and America.—F. G.) have practiced this way and have discovered no disadvantage. A poor article of sugar, he says, in Leipz. Bztg., is not improved by boiling, and good pure sugar is wholesome anyway.

Kuchenmueller condemns in Allgem. Ztg. f. Bzcht. the use of smoke to subdue bees, and says that by spraying them with sweetened water, using an atomizer for the purpose, they may be brought into a very amicable state of mind, so that work on the hive becomes a pleasure rather than a dread. He only gives the bees one puff of smoke when he first opens the hive; after that the spray does the rest of it. This does not look unreasonable, for the bees would all be busy cleaning up the sweet spray while the operator conducts his work.

Far-fetched.—Rose honey is not the honey from roses but the honey which the bees store during the time when the roses bloom, says the Allgem. Ztg. f. Bzcht. (Isn't that a little bit misleading?—F. G.)

A well packed hive preserves the temperature conducive to the well-being of the bees much better than single-walled, wooden hives. Herr H. Paul experimented with hives packed with cork, versus wooden hives, and found a great difference in their heat preserving qualities. For example, on October 6, with a temperature of 48 degrees Fahrenheit at 11:30 a. m., the cork hive showed 75 degrees F., the board hive only 53½; on November 18 at 7 o'clock a. m., with an outside temperature of about 25 degrees F., the cork hive was maintaining 48 degrees, while in the board hive the temperature had gone down to the freezing point, etc. The well packed hive also prevents overheating in the summer. The conclusion is that well packed hives are most paying.—Phalz. Bztg.

Bee-keepers in Germany can purchase glass jars like the regular No. 25 for holding one pound at less than two and a half cents each. The American bee-keeper has to pay very nearly twice that amount, although he receives but half as much for his honey.

AUSTRIA.

The Austrians intend to establish a standard as to the color of honey. A. Wohlrab says in Bienen-Vater that the majority of honey consumers buy the honey by color and would not take a darker colored honey if it was ever so much better. (Such is also the case in America, but it is a singular fact that the lighter colored the honey is, the better is also the taste and flavor. I have rarely found an exception of this rule here.—F. G.)

Isn't this really a matter of personal preference?—Editor.

JAPAN.

According to the Rhein. B. Ztg., Japan has an apicultural institute in the capital, Tokio. The regular term lasts three months, after which time an examination has to be passed by the students which are largely girls. Books, queen bees and apicultural implements are furnished the students at half price. There are also many societies established whose purpose it is to disseminate knowledge of apiculture. The books contain matter borrowed from European works principally.

SWITZERLAND.

"Foul brood spores retain their vitality for years," says Dr. Bruennich in Schweiz Bztg. A certain bee-keeper lost his bees by the disease and four years afterward he stocked up again, using the same combs. The disease developed at once.

HONEY AND BEESWAX MARKETS.
(Dealers' Selling Prices.)

Chicago, Sept. 13.—The supply of honey is very moderate, as is also the demand for choice. We quote our market today as follows: 16 to 18 cents for No. to fancy. Extracted: white, 7½ cents to 8 cents. Beeswax, 30 to 32. There is some California and Utah goods here selling at 17 to 18 cents for best, off grades 2 to 3 cents less.—R. A. Burnett & Co.

Toronto, Sept. 14.—The demand for honey is very good, with supply short. We quote our market today: Comb, $2.50 to $3.00 for good. Extracted, 11 to 12½ cents.—E. Grainger & Co.

Cincinnati, Sept. 9.—Since our last quotation there is no material change in the honey market, with the exception that the demand is a little better. As yet, prices have not reached that high point that many people believe they will. Received this week a car load of white comb honey, which we are selling at from 15 cents to 16 cents from the store. This was the first car out of the State of Colorado, and naturally commanded attention which brought many purchasers. Will have two more cars to arrive, which will more than satisfy the demand, and we look forward to lower prices. Extracted honey is moving as lively as can be expected at this season of the year. Quote white clover in barrels and cans at 7 cents to 9 cents, according to the quality. Amber in barrels at 5 3-4 cents to 7 cents. We are paying 30 cents per pound for choice yellow bees-wax, free from dirt, and 28 cents per pound for darker grades.

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FOR SALE—Italians. Gave 40 lb. surplus. Must sell out as cannot give time. $15 takes a hive. E. W. Burnstead, 70 Mora St., Dorchester, Mass.

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AGENTS WANTED—To sell advertising novelties, good commission allowed. Send for catalogue and terms. American Manufacturing Concern, Falconer, N. Y.

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INCREASE is a hadsome little book telling how to form new colonies without breaking working stocks. A simple, sure, satisfactory plan, 25c. Baby Nuclei tells how to mate many queens from sections with a mere handful of bees; 42 pages, 20 pictures, 50c. Cell Getting tells how to save labor in rearing queens, 50 cents. Queen rearing outfits. Golden all-over and Caucasian Queens. Circulars free. E. L. PRATT. Swarthmore, Pa.

WANTED.—No. 1 white and amber and buckwheat extracted honey in 60 lb. cans or barrels. Send sample and quote lowest price delivered in Preston. M. V. Facey, Preston, Fillmore county, Minn.

YOUR NAME in Tipton's Poultry Breeders Directory will bring you big mail—sample copies of all the leading poultry and farm journals, magazines, letters, circulars, etc. Send 10c. for four months subscription to the Modern Farmer and your name will be inserted in this big directory. Mention your breed of poultry and if more than one kind send 5c. additional for each breed. Write name and address plainly. Send today, silver or stamps. Tipton Publishing Co., Hannibal, Mo., Oct. 7.

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SAM'L FARNSWORTH, Middletown, Ohio.

PREMIUMS FOR COLORADO BEE-KEEPERS.

At the meeting of the Committee on Exhibits held March 2, at Denver, the following premium list has been drawn up by the committee and the following list of premiums will be given away at the next meeting of the Colorado State Bee-Keepers' Association. All paid up members are eligible to take part in this contest.

	1.	2.	3.
No. 1. Best Nucleus Italian Bees & Queen in Observatory hives	$3.00	$2.00	$1.00
No. 2. Best Nucleus Carniolan Bees & Queen in Observatory hives	3.00	2.00	1.00
No. 3. Best Nucleus Caucasian Bees & Queen in Observatory hives	3.00	2.00	1.00
No. 4. Largest & best display of bees of various races	5.00	3.00	2.00
No. 5. Best case of white comb honey	3.00	2.00	1.00
No. 6. Best case of light amber honey	3.00	2.00	1.00
No. 7. Best & largest display of comb honey	5.00	3.00	2.00
No. 8. Best display of comb honey to be product of a single colony for the season of 1907	3.00	2.00	1.00
No. 9. Best 50 lb. of white extracted honey in suitable glass jars for retail trade	3.00	2.00	1.00
No. 10. Best display of 50 lb. of amber (light) extracted honey in suitable glass jars for retail trade	3.00	2.00	1.00
No. 11. Best display of granulated extracted honey in small packages	2.00	1.00	.50
No. 12. Best & largest display of extracted honey	5.00	3.00	2.00
No. 13. Best display of 10 lb. yellow beeswax	2.00	1.00	.50
No. 14. Best display of special designs in beeswax	2.00	1.00	.50

We have also drawn up a few rules for the judging of these exhibits which are as follows:

The best case white comb honey, the best case light amber, and the best photograph, exhibits Nos. 5, 6 and 16, to become the property of the Association, the premium to be paid owner of the honey.

In judging bees the correct markings of each race, quietness on the combs, number of bees in the observatory hive, the appearance and general condition of the comb on which they are displayed and the appearance and the condition of the hive in which they are exhibited should be considered in their proper rotation.

In judging white comb honey the grading rules adopted by the State Association should be accepted as the standard. In light amber honey the same rules should apply excepting color, which matter should be left to the option of the judges.

In judging extracted honey the flavor, color and body of the exhibits should be considered first, then the attractiveness of package and arrangement of the display. In granulated honey, flavor, texture and attractiveness of package and arrangement of exhibit should be considered.

In judging beeswax, color, freedom from impurities, and perfection of form to be considered.

	1.	2.	3.
No. 15. Most instructive display of Apiarian Products, and of the various uses made of Honey & Beeswax	$ 5.00	$3.00	$2.00
No 16 Best Exhibition of Photographs of Apiaries and things pertaining to Apiculture	2.00	1.00	.50

THE COLORADO HONEY PRODUCERS' ASSOCIATION.

Committee on Exhibits,
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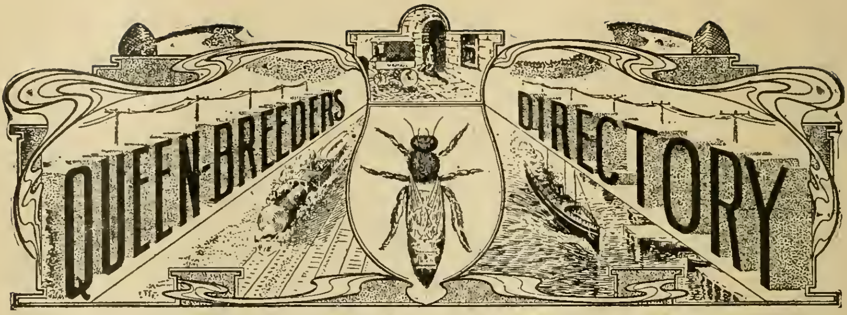

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BUY YOUR QUEENS from the Red Clover Apiary. Bees guaranteed to work on red clover. Fine 3 and 5-banded untested Italian queens, 60 cts. Tested, 75 cts. If wanted before June 25, add 15 cts to above prices. T. L. Fajen, Alma, Mo. Dec. 7.

JOHN M. DAVIS, SPRING HILL, TENN.—Has greatly enlarged and improved his queen-rearing facilities. Two unrelated Carniolans and a dark leather Italian lately imported. My own strains of three-band and golden; "Moore's" long-tongue; Doolittle's golden; all selects. Carniolans mated to Italian drones when desired, No disease. Circular free.

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I MUST SAY TO MY FRIENDS. Please do not send me any more orders for queens this summer. As my health is so poor I find it imposible to continue queen rearing. Thanks to all my friends for their very liberal patronage. W. W. Crim.

ITALIAN AND CAUCASIAN QUEENS and bees; best stock and no disease. My circular is free, and courteous treatment is given all correspondents and patrons. Write me of your needs. A. E. Titoff, Ioamosa, California. Oct. 7

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DANZENBAKER PRIZES

It is to be regretted that so many bee-keepers are satisfied to produce year after year a very ordinary grade of honey as regards its appearance, when by a little more care, and having more suitable fixtures, and by taking the honey from the hive at just the right time, a much larger percentage of "fancy" or "extra fancy" honey could be produced, which would sell at a much higher price. The experience of honey-merchants generally is that there is no difficulty in disposing of large stocks of fancy or extra fancy, even when the market is dull. It is the inferior grades that suffer most at these times. We believe, too, that bee-keepers would be very much better satisfied with their season's work if their best efforts were made to produce a really fine product. To increase further the interest in extra fancy honey, the following prizes are offered for honey produced in Danzenbaker hives during the year 1907, under the following conditions:

FIRST.—As above stated the honey must be produced in a Danzenbaker hive, either the present style or any Danzenbaker hive that has been put out within the last few years. These hives may be had of any dealer in bee-keepers' supplies in any part of the country.

SECOND.—For Classes 1 and 2 we require a shipment of approximately the amount stated, to be made by the bee-keeper direct to us at Medina. After the prizes have been awarded the honey entered for competition in Class 1 or 2 will be held subject to the instructions of the producer. We will sell it at a five per cent commission or we will ship it to any point direct by freight or express. There being good honey markets in our immediate vicinity as Columbus, Cincinnati, Cleveland, Buffalo, and Pittsburg, it can be disposed of without difficulty at good market prices, and the shipper will not have to lose a good market by shipping it here. Neither the honey awarded a prize nor that which obtained no prize is to be our property, but will be sold subject to the instructions of the producer who sends it to us. We are interested only in inspecting it to award the prizes.

THIRD.—For all honey submitted for prizes we must have a definite statement from the producer regarding the conditions under which it was produced whether a light or heavy flow of honey, how the colony was handled, how many colonies in the yard, from what source produced, etc.

FOURTH.—For Classes 3, 4, and 5, we must, in addition to the above report have the signature of two witnesses certifying to the correctness of the report. If the party who sends us the report for the competition is well known to us we shall not require these witnesses. References may be given instead of the signature of witnesses if desired. All parties intending to compete for these prizes should send for blanks which we will furnish, on which the report may be made out.

FIFTH.—It will be noticed in the last three classes, three to five inclusive, that it is not at all necessary to send us the honey—all we require is a report.

SIXTH.—We reserve the right to limit the number of awards in each class, or to make no awards in a class if there are no satisfactory entries for the same.

SEVENTH.—No contestant will be awarded more than one prize in each class, but may make two entries if desired—one in Class 1 or 2, and another in Class 3, 4, or 5.

The classifications for the prizes are as follows:

Class 1.—For best shipment of 200 lbs. of comb honey in Danzenbaker hive.
Class 2.—For best case of comb honey in Danzenbaker sections.
Class 3.—For best report of yield from single colony in Dazenbaker hive.
Class 4.—For best report of yield from five colonies in Danzenbaker hives.
Class 5.—For best report of general results from use of Danzenbaker hive.

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Second.—$7.00.	Five Classes.
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Fifth to Tenth.—$1.00 each.	

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The American Bee-Keeper

NOVEMBER
1907

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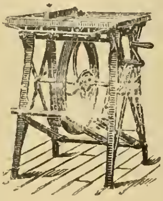

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PROFITABLE MEETING AT WORCESTER, MASS.

AMONG THE especially good addresses at the recent Worcester meeting was that of Mr. Jeffrey, on "Inbreeding, its Advantages and its Dangers." Mr. J. is one of those independent sort of thinkers who does not take much stock in things until he proves it for himself. Also he is always looking for the unexpected and the seemingly impossible. The old ruts he has no use for. But he does not fail to learn from others when he can, even though he feels that he must test and prove their conclusions for himself. Well past middle life, short in stature and unpretentious in manner, he startles one by his energy and vigor. With a full, strong voice and a delivery like a series of cannon shots he held his hearers from start to finish.

The substance of what he had to say was as follows: The breeding together of closely related animals is good or bad in accordance with the proportions of good or bad in the individuals used. If weak, sickly or degenerate stock is used, the result will be degenerate offspring, but if the parent stock is strong the offspring will be also. In support of this contention he cites the Devon cattle and the American Merino sheep. Then he told how he had followed the plan with his bees for over seventeen years, resulting in the constant improvement of his stock. Then having imbibed the notion that close breeding was unsafe he introduced new blood and upset the result of all his labors. Not that the resulting offspring were not strong, but that the individuals varied so that there was no uniformity in the colonies or in the work they did. Next, he proceeded to show how to select and breed bees. A colony, the offspring of some certain queen, show more desirable traits than do other colonies, hence we would perpetuate it if possible. But how? The work, the results, are produced by the workers, who are the result of their mothers' and fathers' blood. A queen reared from their mother, being a full sister, possesses latent within herself the same traits. So far it is easy, but with what blood shall she be mated? Brothers of the drone with which the original queen mated carry only one part of the combination which produced the desirable traits. A drone from the mother of the young queens carries only the blood of his mother, the other half of the original combination. What is needed is a drone possessing blood of both the parents of the workers and such a drone can only be obtained from queen sisters of the workers. Therefore, Mr. Jeffrey lets this first lot of young queens mate as they choose and then from them raises as many drones as he possibly can. When his drones are almost ready he raises another lot of queens from the original queen and mates these to the drones above produced. Now he has queens whose drones and workers possess the bloods which in combination gave the first good results. Again he raises a lot of queens from the original queen and mates them to drones from the last previous lot of queens, and so on as long as the original queen lives. By destroying all queens whose offspring show variation from his ideal type he is steadily increasing the strength of that type as regards its power to reproduce itself. When the old queen dies he selects from the next to the last generation a new queen for a queen-mother and mates her offspring to drones from the generation following hers. With such breeding goes hand in hand a careful and constant watchfulness, alert always for tendencies either upward or downward, saving one, destroying the other. He illustrated his points and backed up his arguments by an almost bewildering array of facts. He said that with controlled mating it would be necessary to use but one drone mother and that progress would be more rapid but that where mating was permitted in the open it was often best to use several queens for drone rearing so as to have a vast host of drones of the desired blood and thus lessen the chances of mismating.

Mr. Latham, in speaking of "Farmer Bee-Keepers, their Needs and their Troubles," condemned in no measured terms, the urging of their adopting frame hives, as is so persistently done by the supply interests and by well meaning but unthinking persons. He said that in his travels he found many farmers who had for years kept bees in box hives, doing so to the direct advantage of their table and their fruit, but having been persuaded that the frame hive was the thing, bought them, put bees in them, left them to themselves as they had always done and in a shorter or longer time lost them all. The box hives could be safely thus left for the bees could readily make them draft-proof and it mattered not whether they occasionally got upset or tilted over. But when the modern hive was used as the farmer almost invariably uses them, they spelt ruin to the upset colony, which upset was often not discovered for weeks, and in their unpainted and neglected condition they soon became a thing of more cracks and holes than of solid surface. He did not fear the competition of the honey from the farmer with box hives, and the farmer who produced honey for market in the modern way was a rare fellow. When questioned as to how to discover disease in bees in box hive he said he tipped the hive over, turned back the bottom, which is hinged on, and with a knife cut a V-shaped piece from the bottom of a comb with brood. If all was right this piece was pushed firmly into place, the bottom closed and the hive set upright.

He was strongly sustained by many present both as regards the farmers and in condemning the propaganda carried on by the supply men urging everyone to keep bees, branding it as harmful to those now engaged in honey production and misleading and hurtful to most who are induced to enter the pursuit.

Mr. Herbert Cary, in his talks on queen rearing, told of how they kept certain colonies at queen rearing all through the season. It was briefly in using part of the colony for cell building while the other part was rearing and caring for brood. When one batch of cells was finished the cell builders were given the brood and queen, and the other half of the colony set at cell building. He roundly condemned the hatching of queens in cages and subjecting them to a diet of candy. He said that it was their experience that queens thus treated were never as good as those having their immediate freedom on combs.

Dr. Wm. P. Brooks, director of the Agricultural College at Amherst, Mass., told of means for increasing or improving the pasturage for bees at once both feasible and successful. Being quite in keeping with the aims and efforts of farmers whether they are bee-keepers or not, and being of special interest to dairymen and poultry raisers it received careful consideration and hearty praise. In old fields, which had not been plowed for over twenty years experiments were conducted to ascertain what might be done towards making such profitable for hay or pasturage without the expense in labor and time incident to the customary method of plowing, cultivating and reseeding. The treatment which he endorsed and which is of such promise to bee-keepers was to top dress the fields with 500 pounds of basic slag meal and 150 pounds of high grade sulphate of potash per acre.

The cost of this is between six and seven dollars per acre, and fields thus treated yielded a most luxuriant growth of white clover making two and one-half tons of hay. The soil is a good, strong, retentive soil. Dr. Brooks said that his bees fairly revelled in vast billowy masses of bloom afforded by the luxuriant growth.

Arthur C. Miller.

AS SEEN FROM ABROAD.

The British Bee Journal has a department occasionally in which American subjects are received. These comments are always interesting and frequently are instructive. Following is a sample page:

AMERICAN AND COLONIAL PAPERS.

Extracts and Comments.

By D. M. Macdonald, Banff.

Top Entrances.—This subject crops up periodically, and of late several bee-keepers outside this country have devoted considerable attention to testing its good points. While not enamored of it, I feel it may have something in its favor. One writer and experimenter says:—"A very unexpected thing happened. There was considerably less mortality during the winter in the hives with the entrance above, or at least a much less number of dead bees found on the alighting-board, and an examination showed that the bottom boards were clean, and that the dead had not been left inside, as might be suspected." The system finds some favor in Germany.

Wired Foundation.—It has often been advocated that a gain would be secured if the manufacturers could sell foundation to bee-keepers with the wires embedded therein. The American Bee-Keeper lately contained an article showing miserable results from an extended use of such wired foundation, but in the issue for August there is a refutation of Mr. Allen Latham's conclusions. This writer practices the "cross-wiring plan," with vertical wires in the foundation and horizontal wires in the frames. It seems to me that there would be far too many wires, and that the game is scarcely worth the candle. If, however, the wires could be embedded by the manufacturer at a merely nominal cost the gain to the busy business man or the extensive bee-keeper would be considerable.

Dark Bees Hardiest.—Mr. J. L. Byer, in "Canadian Beedom," has the following:—"Just lately I was speaking with a bee-keeper who has been in a large number of apiaries in Ontario, and he remarked that in every case the dark bees—Carniolan and natives—had stood the adverse conditions much better than the Italians. My own personal experience," he continues, "is exactly in accord with this view, and the very few weak colonies I have are nearly all headed by Italian queens. The very yellow or five-banders have suffered the worst; in fact, through these parts they have been cleaned out entirely. It seems to be quite the general opinion that these very yellow bees are not so hardy as the leather-colored Italians, yet I have never seen a good explanation as to why this is the case." Several correspondents of Gleanings report like results.

Thick Combs.—Mr. Townsend, in the Bee-Keepers' Review, goes solid for very thick combs for extracting. "With 1 3-4-in. spacing we get great fat combs of honey, and then we run our uncapping-knife deep, cutting the comb clear down even with the frame, and there is rarely ever a comb so uneven but the knife will uncap it the first time over. It is possible to uncap much faster, and there are fewer combs to handle. I do not think it would be putting it too strong to say that two ten-frame upper stories, with eight combs in, can be uncapped as quickly as one with ten frames, and then the eight combs can be extracted in one-fifth less time." He has a good deal more to say in favor of these thick bricks of honey.

Distance Bees Fly.—Messrs. C. P. Dadant and Louis H. Scholl both take up the cudgels in the American Bee Journal in favor of short-distance traveling. By means of a graphic diagram the first-named makes some telling points to support his conclusion "that bees do not usually travel over two miles in search of honey." Mr. Scholl had two yards only one and a half miles apart. Near one of them a compositae bloomed profusely. The bees of the one yard stored their combs heavily, there being the roar of a big honey-flow during the time of the yield. The bees at the other yard did nothing all the summer. They knew absolutely nothing of the good time their neighbors were having only one and a half miles away. Now, why did not they find those flowers? Echo only answers "Why?"

RESEEDING THE RANGE WITH CULTIVATED GRASSES.

Studies and Experiments to Increase the Forage on the Summer Range in National Forests.

THE LIVE-STOCK industry turns to account one of the greatest natural resources of the West—the forage crop.

From the plains to the Pacific an astonishingly large proportion of the area is grazing land. It is estimated that this region contains over 400,000,000 acres which are useful at present only for pasturing stock. A map printed in colors to bring out the main areas of agricultural, grazing, and desert lands was published not long ago. It showed the grazing-land color spread like a sheet over nearly all this vast domain, which comprises something like one-third of the entire United States, with relatively minor patches of the other colors. In arid regions the range is comparatively poor, but almost everywhere enough forage plants can grow to make grazing profitable.

The Forest Service, in co-operation with the Bureau of Plant Industry, has begun a series of experiments to find out how the carrying power of grazing lands within National Forests can be increased. In a nutshell, the problems are, first, how to grow, and second, how to utilize, the largest amount of forage. The conclusions reached are likely to have an important bearing on improved use of the open range generally. The economic possibilities of these experiments are enormous.

In the past the stockman on the public lands has simply taken what nature offered him. But grazing tends to put nature at a disadvantage. Plants which propagate by seed, for example, have no chance when the seed stalks are being eaten off all the time. In many grazing regions the carrying power of the range has been very greatly reduced through the present methods of use. Within National Forests the restriction of the number of stock to the capacity of the range has already checked the worst evils which result from over grazing. But the new investigations promise much greater things.

These investigations are to be carried out along three distinct lines—studies of what can be done in the way of introducing cultivated grasses, studies of range improvement through better knowledge of how wild grasses propagate, and studies of how to handle both cattle and sheep so as to reduce the waste due to herding and trampling. The present account deals with the first, the introduction of cultivated grass.

The man in charge of these studies is Mr. Frederick V. Coville, of the Bureau of Plant Industry, who is an expert in matters connected with the use of the range. Mr. Coville made a careful study of grazing problems in the Cascade Mountains of Oregon for the Interior Department ten years ago, and contributed to the discussion of grazing questions which formed part of the Public Lands Commission report made in 1905. It was on his recommendation that the laboratory for desert botanical research was established by the Carnegie Institution of Washington at Tucson, Ariz. He is, therefore, very well prepared for this work, which to be successful, must be run on thoroughly practical lines.

The experiments will begin in Wallowa County, in northeastern Oregon, in the Imnaha National Forest. Here, at different altitudes, a number of moist natural meadows have been picked out. Those having the greatest altitudes are 10,000 feet or more above the sea, where in early July the snow still covers the ground, although rapidly melting under the summer sun. The lowest meadows are about 5,000 feet above sea level.

The purpose of these wet-meadow experiments is improvement of the summer range. Stock do not winter in the mountains, but are driven gradually higher and higher as the advancing season calls forth the vegetation on which they feed. The winter ranges on the plains, supplemented largely by the hay, alfalfa, and other feed crops which the ranches produce, depend for their utilization upon this summer pasturage, to which the stock can be driven when the dry season sets in. If means can be found to improve the summer range the benefit will be felt from Canada to Arizona and New Mexico, so that the experiments are of broad importance.

In the higher parts of the Imnaha National Forest good late summer pasture for sheep is valuable. Snow covers the ground nine months of the year, and the grass that grows must grow quickly. The natural pasture on these high mountain meadows is fairly good, but there is room for improvement. The native bluegrass does not produce a sod, but grows in bunches. A sod or turf is wanted, and some of the meadows will be seeded with well-known species to test whether they will grow and bring the desired result. Timothy, redtop, bluegrass, and a clover called Alsike, originally brought from Sweden, will be tried. Eight or more patches of from 3 to 20 acres each, will be seeded.

It is a wild and rugged mountain region with few trails, and those very difficult. Harrows or other agricultural machinery could not be taken in, except on the backs of pack animals. Plainly, any method of seeding which could have any practical value must find other instruments than the tools upon which the farmer ordinarily relies. The sharp cutting hoofs of sheep will be the only harrow used.

The meadows selected for sowing will first be grazed as short as sheep can crop the native grass. Since the ground is wet, it will be much cut up by sheep. Clover, timothy, redtop, or bluegrass seed will then be sown broadcast, and the sheep will be driven to and fro across it until the seed is beaten well into the soil. This will be done late in the season, so that the seed will lie dormant until next summer's sun melts the snow and warms the ground. Whether it will grow, and mature a crop in three months, remains to be seen. If it will, one problem of mountain pasturage will have been solved, for a much larger quantity of forage will be furnished by these plants than the native growths supply.

If this grass sowing on the high Oregon mountains is successful, it will open the way for similar range development elsewhere. There is hardly a limit to the possibilities presented.

The accompanying views are reproduced from l'Apiculture Nouvelle, and give an interesting glimpse of migratory bee culture in the mountains of Russia, from which comes the Caucasian bee so much lauded of late in some American journals.

Transporting Bees in the Caucasian Mountains.

A CURMUDGEON'S COMMENTS.

JNO. R. RAGLE.

IF you are going to call bee-keepers "bee-men," Mr. Editor, then how will you refer to women bee-keepers? Shall we call them bee-women, or bee-ladies, or, perhaps, bee-mistresses? It seems to me like the good women bee-keepers, if none others, would help me in "kicking" about the use of that abominable word "bee-man."

As much as I admire W. Z. Hutchinson, I can never become reconciled to his fool contraction plan of comb honey production. That it will succeed in Michigan and parallel latitudes I have not the slightest doubt, simply because he says so. But the world is large, and "Hutch" himself could never make the plan work in our "glorious climate" of California And that's why I say the field of bee papers is limited.

And the 8-frame hive which Eastern supply men so industriously are trying to foist upon bee-keepers everywhere, will never go in any locality in California. Those miserably thin, grooved bottom boards, used for wintering in the East, are a total failure here. Good Lord, deliver us from our Eastern friends and send an enterprising man to California to do business with bee-keepers according to California's needs. There is not a man here now who meets the need.

California is blessed in many big things, and among them, in the bee-keeping world, looms Prof. A. J. Cook. Next to the classical Langstroth book (due, I believe, to the Dadants), Prof. Cook's "Manual of the Apiary" stands prominent. In fecundity of information it is greater than any of the books. More than his apiarian teachings, the worth of the man is great, and if all Californians were morally and mentally modeled as he is modeled, then indeed would this land flow with honey and the milk of human kindness.

I never use quilts on hives. I've tried it, and they are harborers of ants, roaches, ticks and other insects. The double cover is also a failure on that account. I want a single board cover and a broad shade board over it at all times, as a protection from sun in summer and rain in in winter.

For smoker fuel I use oily waste gathered from the machine shops at the mines. As "a coal from the fire" cannot always be had in this warm climate, and as matches do not readily ignite it, I sometimes hold a lighted candle to the waste till it gets to burning well, after which it is not apt to go out. If you should try it, do not drop the grease on your clothes, and look out that you do not set the dry grass on fire.

I have recently read Dr. Miller's little 40-year book, and I wish the young fellow would hurry and write two or three more, as this one is entirely too short; or perhaps it is so interesting that one reaches the end too soon. Well, I shall read it over again, anyway, and more slowly, next time.

Selling honey has been the least of my troubles. It has been fun; I have enjoyed it. I know of no quicker or pleasanter way to make a good day's wage than to take out and sell for ready coin those full, white-capped sections that my bees have given me in a season of abundant bloom. "Easy got," you say? No; there has been much anxiety, watchfulness and painstaking care on the bee-keeper's part. The bees have done well; but not all has depended on them alone. There has been some hard human toil to get in perfection those golden heaps of honey.

How many of you "prominent and well-known" bee-keepers, leaders, instructors and writers have your apiaries in order? Suppose I should come snooping around, some day, to get closer to nature with your methods, just as an old acquaintance who has read your pages and pages of verbosity in bee papers and elsewhere. Would you be prepared for the judgment, Mr. Prominent?

There is another thing I don't like, and that is the Easterners' style of abbreviation for California. They generally get it "Calif." That is wrong. The official abbreviation is "Cal." A good reason for our tolerating it, however, is that it may not become confused with "Col." for Colorado, which is also wrong. The official abbreviation is "Colo." I always write the name of my state in full, but editors don't always print it that way. If Teddy Roosevelt ever finds out about it, we may hear something interesting.

The opening chapter of my new book, "How to Keep Bees 40 Years, or the X. Y. Z. of Advanced Bee Culture, a Complete Guy of the Apiary," will be as follows: "Bees are hard to keep; it is better not to try to keep them, and best to raise hay. There are different ways to keep bees. But chickens or strawberries will pay better. One way, practiced by the hopelessly ignorant, is to put them in boxes and let them alone; another is to put them in 8-frame hives and then contract them, feed them and tinker them to death. Both methods are usually unsuccessful. A third way is to keep them in good hives, with room enough in which to rear their young and store surplus honey; never to rob them so closely that they will suffer for lack of food; to protect them from inclement weather; to see that they always have a good queen, without any interval of queenlessness at all; and, furthermore, to keep them in a place where there are flowers from which they can store a surplus crop. These rules being observed, it will not be necessary to read further in this book. But I have added other chapters in order to be orthodox and that the purchaser may get lots of words for his money."

The man who advertises bees for sale without a queen reminds me of a real estate dealer who would be foolish enough to advertise a house for sale without a roof. Surely I can do better by placing my patronage elsewhere.

A learned orthodox writer in a blase Eastern bee paper recently spoke about the necessity of hiving bees in a jiffy. I have searched all the "catalogs" diligently, but can find no mention of, nor price fixed on "jiffies." I am experimenting and spending money on all the Eastern plans and appliances, and would be willing to try this method if I could only learn what supply house is offering the article for sale.

The one regrettable feature of Californian apicultural journalism was the swift meteoric flight and sudden extinguishment of Bro. Horn, of the Far-Western Bee-Keeper. He started out well, did well, and then died and returned to Missouri, whence he came. May he rest in peace. But let no one else try the experiment of printing a bee paper in the West. It can't be successfully done. Better subscribe for The American Bee-Keeper, and let it go at that.

"After years of observation, experience and experiments," I am prepared to blazon forth the one unequivocal fact that I have learned about bee-keeping, which is that bees can kill toads. There is a superabundance of these greasy, fat, crawling things about my premises, and one which I held squirming at the entrance died happily in half an hour, of paralysis. Another expired in an hour. The other morning I found one little fellow dead and filled with stings, the result of his own greedy heedlessness. I have found dried excrement of toads to consist almost entirely of bee skins. Yet, a good word for them is that they catch moths, ants and other marauding insects about the hives. If I were to "start anew again," I should set the hives up where the clumsy toads couldn't reach them, and then let the animals alone. But I should look out for skunks.

Stent, California.

FROM SANTO DOMINGO.

Sabanala Mar, Santo Domingo,
June 22, 1907.

Editor American Bee-Keeper:—

Your kind answer in June B. K. contains some mistake, so I'll ask again, leaving it to your discretion to answer or not.

The question was: "How can pollen be extracted regardless of comb —pollen to be used." No, not to be fed. Some Frenchman here claims he can make a good drink of which pollen is one of the ingredients. There is some pollen here all the year around.

About the stingless bee I said:

"I never saw the honey bee (neither black nor yellow) at the same time with the stingless, on the same tree.' Yet I have seen them there at other times. One could infer from that that they are enemies, with the odds in favor of the stingless bee. That would say domestication, even if possible, would be of doubtful value.

I have a queen, daughter of an imported Italian queen, supposed to be pure, that has black and yellow drones emerging at the same time, as I have seen by cutting out drone comb.

As I understand, the theory goes that mating has no influence on the drone progeny. If this is true, then I must believe the mother was mismated or some kind of a mongrel. Other daughters of the imported one have yellow drones, or is this probably a support of the new theory of repeated mating of queens by accident one time a yellow drone, the other time a black. Some of the workers of this queen are black, and some yellow; that may be the cause of her mismating. Somehow I suppose it's hard to get pure stock.

About the laziness of bees I take sides with the lazy party, with the exception that a bee out for honey is anything but lazy; that is, as far as my observation goes.

I have a metal comb foundation press which I term a nuisance. I suppose in a cooler climate it might work better. One defect of it is also the depth of the cell walls and the sharp edges which form the cell bottom. This press is from the original Rietsche factory. It does not pay to make foundations, not even here where a pound of foundation from the north costs 75 cents, about 8 sheets Langstroth size to the pound.

Joseph Braun.

Transporting Bees in the Caucasian Mountains.
A Difficult Descent.

HONEY FROM COTTON BLOOM.

L. B. SMITH.

IT HAS always been a surprise to the writer to see how many practical apiarists there really were that had no knowledge of what their surplus honey was gathered from; and still a greater surprise to see how few knew the quality of the honey that was gathered from certain plants and shubs of their knowledge. To illustrate—a bee-keeper of considerable reputation as a honey producer once said to me something as follows when discussing the honey producing plants of our localities: "Say, Mr. Smith, did you know that the cotton bloom furnished 2 grades of honey, that is, a light and a dark grade?" I told him this was new to me, and that he would have to furnish some proof of his statements before I could believe them. He said the red blooms on cotton (which are the blooms of the previous day) always furnished a dark or reddish honey, and that the white blooms (all cotton blooms are white when they first open, or for the first day) furnished a very clear white honey.

I have been a close observer of honey and plants that furnish our surplus honey of the south, and if there is anything I am sure of, it is that honey gathered from the cotton bloom is all very clear and of mild flavor, and is of the very best quality we get here in the south, and is never red or dark in color.

Bees do work freely on both the red and white blooms of the cotton plant—not only that, they work on the squares and half-grown bolls which have honey glands on the under side, and secrete nectar freely when weather conditions are just right. The leaves also have honey glands on the under side of them, and I have seen bees work freely on them the present season, but all the honey, so far as I am able to judge, that is secreted by the honey glands of the cotton plant (either blooms, bolls, or squares) is of the same quality, color and flavor, and that the best. I am well aware that the cotton plant is often infested with plant lice, and have seen the leaves fairly dripping with the so-called "honey dew." That, of course, like all honey obtained from that source, is of dark color and strong flavor. This, though, could not be called honey from cotton, but opens the way for anyone to see how easy it is for one not a close observer to be deceived. How is it possible for the bloom of any one plant to furnish two kinds of honey, say a light and a dark grade?

Then we have often heard bee-keepers say, "When the corn tassles and the sorghum cane comes in bloom, bees will be sure to get rich, for they are both good honey plants. Here again there is some mistake according to my views. I am positive that bees do not get honey from the bloom of either corn or cane, but the stalks and blades of both are often almost covered with these same plant lice, and I have seen the bees fairly swarm on the blades and stalks of both in the early morning, lapping up this "honey dew," which the bloom had nothing to do with furnishing.

The same is true of the elm and various oaks. They do not furnish honey, but are all great pollen producers, and, I have no doubt, are all beneficial to the bees at certain seasons of the year. A prominent writer of the South, on apiculture, once said to me, in reply to what I have said of these plants not furnishing any honey, something like this: "Friend Smith, we are sure these bees and plants furnish at least enough honey to sweeten the pollen they collect from them; if not, how is it the pollen the bees collect from them is sweet to the taste?" My reply to the above is—how is it the flour, cotton seed meal and the various substitutes used by bees for pollen in early spring are sweet to the taste? The answer is very simple and easy. When bees are working on any plant that furnishes no honey, or working on meal or flour, they always carry or have sufficient honey in their honey sacs to moisten the pollen.

It is an easy matter to tell whether bees are gathering honey or only pollen from any plant, and I see no reason why any intelligent person need to be in doubt as to the plants that yield honey, and those that furnish only pollen. And I have my doubts of anyone making a continued success of bee-keeping that does not know the honey plants of their locality.

Rescue, Tex.

Bee-keeping is much more difficult in Europe than in America, and requires different treatment and greater skill in obtaining good results.—B. B. J

We understand that the Far-Western Bee-Keeper has ceased to exist.

THE

American Bee-Keeper

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We do not acknowledge receipt of subscriptions. Your receipt of the journal is evidence of your subscription having been entered.

When the time expires for which The Bee-Keeper has been paid, it will be mailed in a red wrapper, and the red wrapper will continue until the subscription is paid up. Subscribers will confer a favor by carefully noting the color of the wrapper used, and when the red one appears, by promptly sending renewal.

"Discontent is the mainspring of progress." Get the spring.

Do stings trouble you? Congratulate yourself that they will not again—until next season. (M.)

The American Bee Journal has increased its subscription price from 25 to 50 cents a year.

"Do others as they would do you, only do it first." Better see what makes you an "easy mark" and then stick to business.

Don't think for yourselves, it is rank heresy. Ask the great Pooh Bahs. They are paid for giving you advice—of a kind. (M.)

"A man cannot serve two masters," hence do not expect to get unbiased advice from the supply men or their spokesmen, or from the queen dealers. They would be fools to harm their business. (M).

Bees can endure much cold if they are dry, but dampness is fatal, so see to it at once that covers are tight. The veterans do not have to be told, this is for the other fellows. (M.)

Do you keep mice? Don't be so indignant until you are sure that you are not boarding some in your best colonies. See that the mice are not in and then keep them out by screens at the entrance. (M.)

In spare minutes suppose you mentally go over the details of your work and see where some part can be cut out. Look for a chance to make short cuts. Short cuts are a good habit, also a fine art. Get that art habit. (M.)

Instead of trying to cut out the old combs from frames just try plunging them in boiling water. It takes the comb out like magic and leaves the wires intact. A subsequent plunge in boiling lye and a rinse in clear or acidulated water will remove all propolis and leave the frame as good as new. (M.)

"Specialize," is Mr. Hutchinson's battle cry. It is the call of the age, and is the foundation of the striking successes seen in business and the trades. But it makes for narrowness of vision and takes much of the sweetness from life. But, strange to say, the broader a man's vision the better specialist he makes. (M.)

We have recently received from Mr. Stephen N. Green, of Medina, Ohio, a copy of his book entitled "Bee Breeding," an attractively gotten up little volume, the beauty of which is, however, marred by many typographical errors and poor presswork. The subject matter is suggestive of much which, if followed up, should be of benefit to the craft. No price is given. (M.)

Clipping the wings of queens is regarded by Hon. R. L. Taylor, in the Review, as an "invention of the evil one." He further says: "I unhesitatingly pronounce the clipped queens at swarming time to be an unmitigated nuisance." The editor of the Review says, "The best critics are they, who, with what they gainsay, offer another and better way." Mr. Taylor is a careful, learned and proficient apiarist, and an explanation of the "better way" is awaited with interest. (H.)

Some unknown friend has sent us a copy of a newspaper published in Pretoria, South Africa, in which is reproduced the long article on bees injuring grapes, by W. R. Gilbert, recently published in these columns. Three whole articles and other items from The Bee-Keeper also appear in the Australasian Bee-Keeper for August, while the Irish Bee Journal for September contains an extended notice of our work, being very complimentary to The Bee-Keeper and its editor. These evidences of the increasing popularity of The Bee-Keeper abroad and the evidences of the good will of our brother editors of foreign lands are deeply appreciated, whether merited or not. (H.)

So you have just discovered that some colonies are short of stores. Well, fill four quart fruit jars with hot syrup, so hot that you can barely hold your finger in it, tie cheese cloth over the jar tops and stand the jars top down and close together on top of the frames right above the cluster. Cover jars and frames with several thicknesses of cloth so as to retain the heat as long as possible. (An extra body, of course, is set onto the brood chamber to accommodate the jars.) If all the food is not taken within, say, six or eight hours, reheat the syrup and return it. Use syrup for such feeding made half sugar and half water. **And don't let it** happen again. (M.)

During the past three months the editor, with his family, has been traveling and rusticating in several of the Northern states and Canada, and The Bee-Keeper has, therefore, been necessarily neglected to some extent. By the time this number is in the hands of the reader he hopes to be once more at his desk, rested and ready to resume his work with renewed energy. Each and every reader of The Bee-Keeper is cordially invited to send in articles and items on apiarian subjects; to discuss bee matters and to participate generally in the exchange of ideas relating to bee culture. We want to make The Bee-Keeper the most spicy and interesting bee journal in the world during the coming winter months. Write us. (H.)

Some of the papers are making much ado over a plurality of queens in a hive. It makes good copy and amuses the children. Somewhere certain self-appointed leaders have said that an eight-frame hive was as large as one queen could fill. What will two do in it? Use two stories? Somewhere it has been said that the advantage of a shallow hive was in getting the honey into the supers. How shallow is a two-story L. hive? Somewhere there are sundry instructions for artificial increase, for requeening, etc., the burden of which is, "first find the queen," which one under the new plan? Multiply the present queen-hunting fun by two or more and then try and smile. It will make business good for the queen dealers. Perhaps, too, the bland and guileless supply man will devise new hives especially for the system, and we can amuse ourselves finding ways and means to obtain them. Also we can use our superabundance of idle time in putting them together, in populating them, and in the multifarious manipulations connected therewith. Hooray, "Blaw hot and blaw coold." (M.)

"Things are seldom what they seem;
Skimmed milk masquerades as cream,"

also "shaky," "flaky" lumber is called first quality, and sloppy workmanship is called "of the best." The miserable stuff regularly sent out by some manufacturers pretending to use the best material and work is only equaled by the excuses (and that is all), which they offer to complainants. The writer has just been overhauling seventy-five hives ordered, delivered, charged and paid for as the "best grade of material and best grade of work." Perhaps it was the "best" those manufacturers knew of, but compared with really first-class goods the first mentioned would rank with the rankest. Much of the "first quality" pine was checked and "flaked" like weather-worn hemlock. Many edges were just as the boards had come from the sawmill. In not a few cases ends were from a sixteenth to an eighteenth wider or narrower than the sides, presumably to let out the "wind" of manufacturers' advertisements and self-sanctification. The worst of these hives have never been used, they were cast aside until time could be found to complete their manufacture. Really high-grade goods at honest prices are the cheapest, but when one pays for the "high grade" and gets something way below, one feels like also sending the vendor "way below."

It will soon be time to lay in your supplies for the coming season, and much of your future profit will depend on what, how and where you buy. Do not be in a hurry to decide. Be careful not to saddle yourself with unnecessary implements, nor go to the other extreme and do without really helpful appliances, the lack of which will increase the labor of caring for your bees. If you are not sure of what you should buy and where you should buy it, compare notes with other bee men, and you may then be better able to decide.

Do not be afraid to spend money for permanent appliances if they will lessen the labor item, but satisfy yourself that they really will, don't take the supply man's say-so. He may be sincere, but he is selling them. Sharpen the teeth of the old saw, "Penny Wise and Pound Foolish," and cogitate thereon. (M.)

COLORADO STATE CONVENTION.

The 28th annual convention of the Colorado State Bee-Keepers' Association will convene in Denver, November 19—21, at the Chamber of Commerce building.

A good time is expected. The programme cannot be published at this time, but it will be arranged later.

We expect to have some practical demonstrations with bees in a wire cage, such as shook swarming and treating of foul brood, etc. There will be a section contest also, which will prove interesting.

Everybody is invited to attend and help make the meeting a profitable and enjoyable one.

S. Francis,
Sec. Colorado State B. K. Ass'n.

THE BEE.

Dr. Watts was right. The bee is really a most industrious insect. A plodding statistician has found out that each pound of honey secreted involves the necessity of the bee visiting 218,750 flowers. This in itself is no mean labour. That the bee is not gluttonous and does not consume more that it earns is conclusively proved by the fact that 164,000,000 pounds of honey are annually sold throughout the world for the delectation and comfort of the human race. The United States stands at the head of the list of honey-producers, with sixty-one million pounds, and Germany comes next with forty million. England's production is so small that the statistician has not taken any notice of it; but, somehow or other, the best from all other countries finds its way to the London market.—British Newspaper.

ECONOMICS OF APICULTURE.

ARTHUR C. MILLER.

THE ECONOMICS of apiculture seem to have received scant attention in the bee press, why, it would be hard to tell. That such a subject needs careful consideration is forcibly impresed upon one as he visits apiarists in various sections. All too often there is a woeful lack of proper equipment, necessitating increased labor with its resultant cost. Or when a fair equipment is found, it is seldom that it is supplemented by economic management. The matter of equipment and operation is of more concern to persons already established in the business of honey production than to the novice and "little fellows," the faddists who fatten the pockets of the supply men and make so much trouble for the rest of us.

Changes in equipment have so often been urged by manufacturing interests and the advice when followed has so often been disastrous that honey producers today look askance at anything which savors of change. But there are changes and changes, and the change which you may make after careful deliberation may not add anything to the supply man's coffers, though helping to fill your own.

Changes in management are freely urged by every penny-a-liner, and when the latter's advice helps the sale of some contraption he is endorsed and glorified as an "authority," and there are several such who have been "made" by the supply interests. Naturally the producers are getting skeptical. Confronted by these conditions it would be hazardous to offer specific advice as to the kind of equipment a man should have or the system he should pursue, hence I will content myself with pointing out some of the troubles as I have seen them.

Without exception the hives in use are ruinously expensive—in labor. Even with the most approved management there is an enormous amount of lifting and shifting, all costing in labor, today the most expensive item of life. And when the hive is of the much-patented, many-pieced contrivances, run on the spring-stimulation, broad-shifting and multifarious tinkering plan, the kind which furnishes much material for space filling in the papers, the labor item is beyond belief. Fortunate it is for the followers of such methods that they do not have to pay in cash and by the hour for the labor involved. And yet they generally do pay manifold, but in such indirect ways that they seldom realize the cost.

Just what sort of a hive will be the most economical, or how those now in use may be modified, are questions which will not be answered off hand, and probably the answer will come only after much careful investigation by many practical men. I know of a few men who have been quietly working at the problem for several years and from diametrically opposite ways. One is working with a low-priced one-story hive, virtually the Adair Long Idea hive, the other with a hive whose greatest dimension is vertically and whose first cost would stagger the average bee-keeper. Both men are seeking ways to save labor, to cut down cost of production. The first cost of the hive is of minor importance if the hive will enable one to so manage the bees therein as to materially reduce the amount of labor necessary to secure a crop of honey. The average hive, with a proper set of supers, costs, say, $1.50, the annual interest on which is nine cents. By doubling the first cost, the annual fixed charge becomes only eighteen cents, but if it halves the labor, the saving will be many times eighteen cents. If the apiarist figures his own time at the price he would have to pay someone else, as he should, he will be surprised at the cost in labor of the manipulation of a colony of bees for one season. If he is in the honey-producing business for what it will pay, then he must cut down the labor item, and if it can be done by modifying or changing the hives, then the sooner he finds it out the sooner he will stop a leak in his finances. If he can find no way to make a profitable change in hives, he may find a saving by increasing the number of his colonies and simplifying his system.

"Manipulation" is but another term for "labor," and that but a synonym for "money," but from the amount of manipulation commonly advocated one would think it cost nothing, had no value. Manipulation is closely associatd with the sort of hive used, some requiring more than others to secure the same results, but there are few hives that necessitate a fraction of the manipulation commonly advocated. Stimulative feeding, transposing brood, building up weak colonies, etc., may pay the man who writes them up—for his manuscript only—but the busy honey producer must have shorter, simpler, less expensive ways. Some men are seeking them through a better understanding of the bees' habits, others through hives, implements, buildings, records and general systems which simplify and make possible short cuts.

In a recent conversation with a bright bee-keeper, one who has good hives and handy appliances, the matter of manipulation was touched upon and it developed that he averaged six more or less complete inspections of every colony from the opening of spring until the supers were put on. It would take a good many pounds of honey to pay for that labor. When I stated that I saw the inside of my colonies but once a year, and not all of them that often (excepting a few used for experiments), he was astounded and wanted to know how I did it. It is no secret. The method followed I have frequently written about. In a nutshell it is learning what internal conditions are indicated by external appearances (above and below combs, as well as at entrance, are all external to the brood nest), and then with a knowledge of bees' habits, applying the simplest methods to produce desired results.

If I did not cut the labor item to its lowest point, I should be unable to care for the hundred and odd colonies scattered in some half-dozen places and at distances from home ranging from eighteen miles south to fifteen miles north. Mr. Latham is the only man I know of who has reduced labor to as low a point as I have, and on some parts of the business he has beaten me. He is the busy principal of a big high school and his free time is from July first to September first, and yet he successfully handles over one hundred and twenty-five colonies scattered in central Massachusetts and central Connecticut and on the outer end of Cape Cod. I am closely confined to business in the city, and except for a half-day Saturdays and a few holidays have no time to reach the out apiaries. I know that both Mr. Latham and myself secure as high results as any bee-keeper in the same localities, and I know we do it with but a mere fraction of the labor used by them. Where would we be should we try to run our bees on the stimulation multimanipulation plan? How would we come out should we try to nurse up weak colones? Personally I am increasing my colonies as fast as I can, and I understand that Mr. Latham is doing the same, something neither of us would dare to do if we did not know that we could handle them readily and rapidly.

Providence, R. I., Oct. 15, 1907.

BENEFIT OF BEE-PAPERS.

J. J. WILDER.

THE BEE-KEEPING fraternity should be proud of their bee-papers. Never before have the editors put forth as great efforts increasing their staffs of contributors, penetrating the entire globe for news, thus giving their subscribers the best thought on the industry.

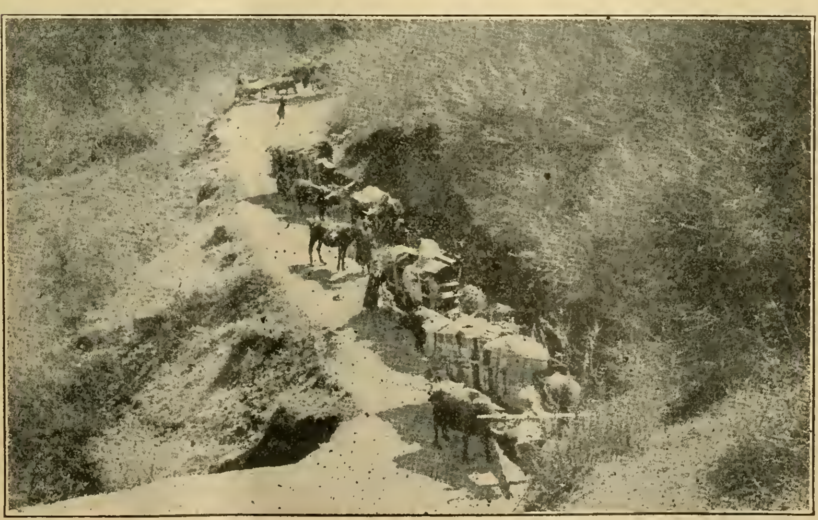
A few days ago I came across a few sample copies of bee-papers sent to me long ago, and I compared them with new editions. The improvement was beyond description, and I remarked, "What kind of a bee-keeper would I have been today, and what sort of a bee business would I have established if I had read and studied the missing copies."

Bee-papers often seem worthless or a puzzle to beginners, but if they will constantly read and study the subjects discussed, this will soon disappear, and it will be a sheet of instruction. Now that the editors are giving us good papers, and depending on us to help them make them better, it should be our duty to help enlarge their list of subscribers. This we can do in some way, and we will have better bee-papers, help our fellow bee-keepers, ourselves, and all the bee-keeping world.

WORK IN THE APIARY FOR OCTOBER.

This is the last month in which to do bee work this season, and the neglect now will develop into losses next season. The colonies containing old queens will run down to weaklings by spring. The weaklings now will run down to bee moth by spring. So now is the last good chance to requeen and build up. All extracting should be done, and the combs given back to the care of the bees, and all section honey supers taken off, and all sections removed and scraped up. The marketable ones cased and crated ready for market, and the culls set away for baits next season. Begin preparing the colonies thus: Take an empty hive body and bottom, and remove the first hive on the first row in the apiary, and set it on a stand or bench just high enough to be convenient; put the extra bottom and empty hive body on the old stand, remove the tops, smoke the bees down, scrape off the tops of the frames, lift out the first frame, clean it up all around, and if the comb is two-thirds full of honey, set it in the extra hive body; if not, exchange it for a fuller frame from a drawing colony, or some strong one which has it to spare. Take out the next frame, and so on, until all the frames in the hive have been cleaned up, setting them back as finished in the extra hive body as near the same position as possible as in the old hive. Close inspection made of each frame, if the rim of honey around the brood is heavy, put in a little frame last; if light, put in a heavy frame last. Clean up the top and put it on, looking to see if it fits down good all around. Render all the scrapings into wax. At this time a little honey is coming in from late fall flowers, and but little danger of robbing, but if you put this job off until next spring, it will be a bad time to disturb the bees, and cause robbing. An apiary thus treated will winter in the south on the summer stands about 100 per cent.

Cordele, Ga.



Bee Caravan in the Caucasian Mountains.

REPORT OF THE COLORADO STATE BEE-KEEPERS' CONVENTION.

CONTINUED FROM LAST MONTH.

Mr. Collins: Motion: All of those who are willing to assist in this mating yard and to aid the government, to rise.

Motion carried unanimously.

Those who stood, were: Fred Wich, Broomfield, Colorado; H. Rauchfuss, Montclair, Colorado; D. C. Polhemus, Lamar, Colorado; J. A. Everet, Denver, Colorado; O. Foster, Boulder, Colorado; Chas. Adams, Greeley, Colorado; F. Rauchfuss, Denver, Colorado; M. A. Gill, Longmont, Colorado; R. H. Rhodes, Platteville, Colorado; McKinstry, Longmont, Colorado. C. Noel, 40 Str. Sta. Denver, Colorado; V. Devinney, Edgewater, Colorado; W. L. Porter, Denver, Colorado; H. Crawford, Broomfield, Colorado; W. P. Collins, Boulder, Colorado; Wilson, Longmont, Colorado; S. Francis, Erie, Colorado; A. F. Foster, Boulder, Colorado.

Second Day: Second Session:

Report of Committee, cutting foundation for section contest.

Francis: Cutting foundation 3 1-2 minutes.

Gill: Cutting foundation 2 minutes.

Collins: Cutting foundation 2 1-3 minutes.

Tomlin: Cutting foundation 3 1-4 minutes.

Putting up sections: Mr. Francis: 1st. super 7 3-4 minutes; 2nd. super 6 minutes; 3rd. super 7 minutes; 4th super 5 3-4 minutes; Total 26 1-2 minutes. Two pieces foundation down.

Mrs. Gill: 1st super 6 1-2 minutes; 2nd super 6 1-4 minutes; 3rd super 7 minutes; 4th super 6 1-2 minutes; Total 26 1-2 minutes. Eight pieces of foundation down.

Mr. Collins: 1st super 6 1-2 minutes; 2nd super 9 minutes; 3rd super 5 1-2 minutes; 4th super 10 minutes; Total 31 minutes. One crooked foundation fastened in, one section of imperfect, and one top starter down, broke ten sections.

Mr. Adams: Four supers, sections folded 11 minutes.

Mr. Tomlin: Four supers, foundation fastened, 25 1-2 minutes.

Mr. Gill: In moving our supers I generally take from 80 to 100, pile them up ten high using a 12x16 wagon sheet and a 2x4 standing up edgeways under it so air can pass through.

Mr. Francis: I never had air space and never had trouble in melting down foundation.

Mr. Rhodes: As a member of the section contest committee, I came across the fact that the foundation had cooled too quick.

Mr. Porter: I would say that if contestants had their own machine they could do a great deal better. There is no such time as that made here in putting up sections, if there is any more contests, let contestants have their own machine and have everything just as at home.

Mr. Gill: No, that did not cool too quick, the plate was too hot, that was a new lamp with a No. 2 burner, the wax is a little bit too wide and all together it has not amounted to much, it has been very unsatisfactory.

Mr. H. Rauchfuss: The hotter the plate, the faster the movement the better work.

Mr. Adams and Mr. Tomlin: One defective section, seven loose foundations. Total 36 1-2 minutes.

Mr. S. Francis is the best and receives the two dollar prize, Mrs. Gill, second best and receives the one dollar prize.

Motion made to receive the report and discharge the committee.

Mr. A. F. Foster: What is the extreme width of bottom starter, I think not quite 1-2 inch wide.

Mr. Porter: If the bottom starter is cut too wide it will topple over.

Mr. H. Rauchfuss: My miter box has been used last summer and the foundation has never leaned over, the width of foundation was 1-2 inch bottom starters.

Mr. Gill: I cut mine 5-8 inch and when they are melted, over a 1-16 to a 1-8 they are about 1-2 inch. We don't have any difficulty with them, and in moving them out in the heat of summer they drop over if any wider.

Mr. H. Rauchfuss: Mr. Gill speaks

of moving supers. I have moved supers in this way, double canvas over the whole thing, so the air will circulate in them and keep cool.

Worker Comb in the Brood Frames

Paper by Mr. W. L. Porter.

To get the best results out of any business it is necessary to have everything pertaining to it in the best order. We keep bees for their honey-gathering ability.

It is only the worker bees that gather honey. The drones are not only in the way but through the period of their life they consume a large amount of honey. It is only the worker cells that produce worker bees. It can be readily seen then how important it is to have all or as near all as possible worker combs in the breeding part of the hive.

It has been my experience in handling a great many bees that I have bought and leased that quite a large percent of the combs in the brood chamber is drone and very often in the brood season these are well filled with a stock of drone bees in all stages from egg up to the perfect drone bees. It is hard to estimate how much loss there is to the bee-keeper, but it is quite an amount and is in proportion to the amount of drones produced in the hive.

The way to prevent this loss is not to have drone comb in the brood frames, and in this way cause the queen to produce nothing but worker bees. There are two ways to prevent this.

The first is to have the bees build worker combs. The second is, use full sheets of foundation fastened in so it will not stretch or sag. Many consider it expensive to use full sheets and do not have the ready money to invest, and depend entirely on the bees building the combs from starters. If starters are used they should be as narrow as possible. I use a strip four cells wide. If a wider strip is used the lower edge expands and causes the comb to be fluted giving it a wavy effect. After you have the starter properly in then comes the task of getting bees to build worker combs, which is not always easy. If we put the starters in a full hive and they have a desire to swarm as is very often the case, that whole comb will be drone and filled with drone eggs as fast as made.

If we give the starters to a hive that is strong and has no drawn combs and the queen be old, soon to be replaced, the probability is one-half of the comb will be drone. If the starters are put in a hive when there is a great rapid honey flow the bees, in their hurry to get room for the honey, will build what we call storage cells. They are made large and irregular and always produce drones if eggs are laid in them. There are certain conditions where they will build almost perfect worker combs. If we have a young vigorous queen with a medium small cluster of bees, where the whole desire of the hive is to build up and get strong, then they want worker bees and not drones and the hives will build all worker combs for a while, and these are the hives we want to select to build our combs. If we wish to use full drawn combs for extracting or other purposes and have frames on hand with starters we can take out the full combs from these hives and replace with starters and in this way have worker combs built. This will be true until the medium swarms build up to the condition where they are strong enough to have the swarming desire then look out for drone combs. By taking these precautions we may get good worker combs built from starters. On the second point of getting worker comb built on full sheets this insures at all times perfect worker comb and the bees helped along so they produce the comb much quicker, and is a paying investment, and the combs are stronger and give satisfaction for brood raising and extracting purposes. If full sheets are used they must be properly fastened in so the combs can not stretch if they are suspended by their own weight. The comb in hot weather, will stretch at the top of the comb and the cells will be irregular in shape and the brood raised in them will produce drones. I have seen combs suspended in this way where one-quarter of the comb was useless to raise worker bees. The most common way for bracing the brood foundation is by stretching very fine wire in the frame and then with a little tracing wheel imbed the wire into the foundation. This method to me had proven unsatisfactory, the frame is not sufficiently heavy to hold the wire tight. The frame gives in time, the wire sags and becomes loose, making a nuisance instead of a support.

Wood splints have been used some and I have experimented along this line and with me the method has proven satisfactory. I have put them in horizontal and perpendicular, but of late I put them in at angles or oblique with the frame. These brace the frame to a wonderful extent and as the pull on the wax is at different angles there is no slipping in hot weather as it often does with wire.

These, for extracting, are ideal, for we all know when a comb is set upon the corner the frame often is wrenched in uncapping and the comb is broken before it goes into the extractor. In conclusion I would say it pays and pays well to have worker comb in the brood frame, and if you have combs built in the old way it will pay to go over the comb and cut out all the drone and graft in worker comb in its place.

This can be best done in the spring when the hives are light in stores and brood. The bits of drone comb cut out are very rich in wax and will almost make wax enough to buy worker foundation for the drone comb replaced.

By paying attention along these lines the profit of the apiary will be enhanced and the work will be done with greater pleasure.

Mr. H. Rauchfuss: This is something similar to the way we used to wire frames on all four corners and turn them over to a hive. They were the most imperfect combs we ever had. It will have to sag, and does sag, it ought to sag all the way through, as soon as it will strike bottom it will sag another way. I have tried wires where they would cross each other. We used to wire our frames up and down. We also used tin, and wherever that piece of tin was there was an imperfect space 1-2 inch wide. There was a streak of black through the center. In regard to stretching of the foundation, the bees will hammer foundation until it gives and when foundation gets bigger where are they going to put it? The actual work of bees hammers it down.

Mr. Porter: I wish I had some of the combs that had been built this summer. Those combs for brood raising and extracting stood a great deal of usage and very satisfactory.

Mr. Foster: I would like to know why the foundation is left for opening at the bottom if it does not sag. The stretch should be more in the middle, I think.

Mr. Gill: There is something in regard to getting perfect combs made as stated. They make it larger and it gives them that sag, if you give starters to a natural swarm and the swarm of bees fill their combs they will carry that down from 90 to 95 per cent worker combs. All the comb they build is worker combs. I do claim that with absolutely certain conditions we can get a good worker comb with starters.

Some Neglected Points Where We Can Improve to Best Advantage.

Paper by Mr. R. C. Aikin.

Man is a bundle of habits. We are continually prone to do things—not in the light of reason but from force of habit. Habit taught us to say "Sweep the home out," for "Sweep the floor;" "Wipe your feet off," for "Clean your shoes," "Gather up" for gather, etc. Just the other day a man who was doing some painting for me, asked for a broom, to "sweep the roof off," I told him I wanted the roof to remain on, and be painted where it was.

Now, in like manner we do most of our business just as we have become accustomed to doing, we even go so far as to make ourselves believe ours the only way. Custom—habit—governs in methods and manners. We keep bees and market their products according to custom or habit. It may be a habit of our own, or the habit of others after whom we copy. If a certain firm or company do thus and so, recommending certain hives or methods as the right and only way, do not take up their habit, and do likewise because they do it so, weigh the evidence and form your conclusions in a reasonable manner. It is said that not one in ten of the people do their own thinking, the leaders in politics, in the church, in the press, etc., do our thinking for us, and we, like the unsuspecting lamb, innocently slip our heads into the noose.

No, I am not advocating that every man be a sceptic. We have a honey marketing association—a co-operative company. There is an opportunity for every bee-keeper in the state to come in, to offer his wisdom, to help himself and others. This gathering today is a palace of conference, an opportunity to compare notes, experiences, plans, methods. If I offer thoughts, describe my habits of procedure, you are here not alone to hear of my way and follow, but to show me my errors, and if possible, change my wrong habits to the right.

Then one place where we may improve is by doing our own thinking. Hear what others have to say, analyze or digest their thoughts, cutting the good from the bad, in a brotherly spirit helping each other. Have more confidence in each other, and enough confidence in yourself to think reasonably on all subjects. When you differ with a brother do it honestly and openly from the standpoint of reason, giving every man credit for being honest in opinion and practice. Condemn wrong opinions—beliefs—but always concede the other man's rights to differ, forbearing one another.

Another point where improvement can be made is in producing a better grade of honey. In producing comb-section or box-honey. The fact that it must of necessity be left on the hive to ripen at least until sealed; this almost certainly insures a good article so far as flavor and quality goes, though it be ever so ungainly in appearance. It is in the matter of appearance, and of convenience that the most improvement can be made in this part of our product. Separators or some method should always be used to insure straight and fine appearance that appeals to the eye, and in accomplishing this we also make the honey more easy to handle without damage and more easily retailed as then it can go out by the piece.

Besides separators, very strong colonies must be used in producing comb, this is one thing that is absolutely necessary. To some extent the lack of numbers may be overcome by contracting the hive, but contraction usually sacrifices future usefulness of the colony, often its very life.

But it is the production and handling of extracted that the greatest opportunity opens for improvement. Extracting is often done before the honey is ripe, before the bees even have considered it ready or safe to seal. Thin raw honey is by no means relished by the consumer—it does not taste like more.

There is a prevailing idea that extracted honey must be water white (clear) as its chief characteristic, this with the idea that the producer gets greater quantity with less labor and expense has become a great evil. This point must be guarded. Let the honey remain to be ripened by the bees before extracting. If this is done the product will be just as much, cost no more labor, and when it goes to the palate will compel the eater to call for more.

Another improvement can be made in extracted by doing away with the fad that it must be strictly clear and thoroughly liquid. In the matter of color, the great majority care not a snap whether it is clear, amber or dark so it has the flavor and body, and very many care not if it be candied just so it has these qualities. Strive for flavor, body and inexpensiveness of package yet convenient to handle by all parties concerned. Add to this, getting the product as direct to the consumer as possible and very much more will be consumed. People as a body want quality in that which they eat; looks in what they wear.

Many other things might be added, and some I meant to deal with, but matters over which I have no control have prevented in the preparation of this paper, suffice this to start discussion and let the members enlarge upon the subject.

ELECTION OF OFFICERS.

President: W. P. Collins, Boulder

Vice-President: W. L. Porter, Denver.

Secretary: S. Francis, Erie.

Treasurer: Mrs. R. H. Rhodes.

Oliver Foster; Member of Executive Committee.

Legislative Committee: To be continued for another year.

Frank Rauchfuss, V. Devinney, M. A. Gill, W. L. Porter, R. C. Aikin.

Program Committee: H. Rauchfuss, M. A. Gill and Mr. Jouno.

Exhibit Committee: F. Rauchfuss, A. Elliott, M. A. Gill, Mr. Porter, Mr. Pease.

Committee to draft resolutions: Mr. Francis, Mr. Booth and Mr. Foster.

Motion made and carried that an order be drawn on the treasurer for these two prizes.

Motion made and seconded that we have a three-day session instead of two, next year.

Motion made that bill of secretary be accepted and order drawn on the treasurer.

Report of committee on resolutions:

The following resolutions are hereby respectfully submitted by the committee on resolutions.

1st. Resolved: That we, the Colorado State Bee-Keepers' Association in 27th annual convention assembled, extend our sincere thanks to the Chamber of Commerce for their courtesy, in furnishing us the use of their assembly hall for our sessions.

2nd. To the transportation companies for the reduced rates to members of the Association.

3rd. To the city press of Denver for the kindly reports of our sessions.

4th. To the retiring officers for their faithful services during the past year.

Respectfully submitted,
S. Francis,
Levi Booth,
Oliver Foster.

Question: What is the best method for cleaning and casing honey?

Mr. Collins: I am interested in this subject as I have the misfortune of being color blind.

H. Rauchfuss: I can only state that we have three cases No. 1, No. 2 and No. 3, and then we bring in our supers. We have a section of No. 1 and No. 2 and No. 3 sitting before us, and we go by that. It is important to have these sections to go by. Soon you get so that you will not have to compare but it is necessary that you have them there to compare, for towards the end of the season you get No. 2 that you want to keep putting in as No. 1, that honey does not compare with the honey at all, with what you put up at the first of the season. There is another thing to be taken into consideration, don't think you will get more money if you smuggle some No. 2 in with the No. 1; keep your No. 1 separate, for if you mix it that way you will have poor No. 1 and poor No. 2, while the other way you will have fancy No. 1 and not No. 2.

Cleaning sections: The most essential part is, don't get them dirty. Use as few old sections as possible. You get a few cents a case less for that honey than if you use clean sections. You take an old case and put honey in it, it will never look as nice as if in a new case. Use new cases, and have them uniform. Don't leave your sections on longer than necessary so they get travel stained. Take a sharp knife, rather smooth edge, so it does not make any edges on the section, be very careful in taking them out of supers. Never take them out at the notched end. Face the front of case uniform in color. Do not pack them right away but keep them sorted. The less you handle your honey the better.

Mr. Steele: I don't like the idea of piling honey on the table. We all know that in grading honey each colony does a different kind of work. You get a different kind of section all through. If you grade your honey, take super, pick out grades and fill out case of one super, you have one kind of honey. It makes a better showing and the party that buys the honey gets all the one kind of honey.

Mr. Dudley: I tell you while we are speaking of it, to clean edges of sections we have a little plane we plane it right off. We have tried the usual way of cleaning sections, and have had complaints but never had a complaint by using this method, and it does nice work.

Mr. Collins: We use shoemakers' knives.

H. Rauchfuss: We use canvas or oilcloth to cover over sections. Now to avoid stains, if you provide a bee-space or a space on top you have not that to contend with. I went out East to load a car of honey, sections were all upside down. Do not turn sections upside down, place them in case as you take them out of super.

Question: Does the man who is so particular about scraping his sections get any more for his honey than the man who does not?

H. Rauchfuss: Most assuredly.

S. Francis: I know a party that did not scrape his sections, received $3.00 per case which is more than I got for my No. 1.

Mr. Polhemus: I went out to sell some honey, the dealer that handled it wanted a good No. 1, and got a better price for it, what some people call No. 1 is not No. 1.

H. Rauchfuss: A good many years back I was going down Market street. I met a party who was trying to sell some honey. He had gone in one of the houses and informed me that they did not want any honey. I went in, as it happened to be the same place that I was headed for, had sold previous years, he paid a cent more for my honey and never looked in the case, run chances and would rather pay a cent more per pound than be bothered with opening case, he wanted No. 1 for No. 1 and No. 2 for No. 2. He did not want to be deceived nor did he want to deceive his customers. You will have to grade right or you will not have any place to put your honey.

Question: "What is your method for swarm control?"

Mr. Collins: My own experience for controlling swarms is, in shaking the swarms of bees; I am bound to lose some brood. When I see that they are ready to swarm I have simply found my queen, laid her down in front of the hive, put a hive in place of the old hive, put her in front of new hive just as quickly as I can. Do it a few hours before leaving apairy. You have every old bee out of your swarm and have young bees in the new swarm.

H. Rauchfuss: We have some rather weak and some rather small colonies. I exchange stands with the strong and weak colonies. so that the weak one gets just what it needs. It is good brood that they want. What they want is bees. Bees to cover that brood. A queen or the bees that she produces might not be very strong, might not winter well, but at the same time might do good work. This queen is capable of raising a good sized swarm and fill their hive with brood and make a good colony. They commence to work with much more vigor than if you let the old bees with them, and there is such a thing as too strong colonies to do good work in the supers. Medium size colonies will, on an average, gather more honey than those great big colonies. It is very hard to get strong colonies.

Mr. Foster: Do you use starters in the frames in the new hive with your new swarm?

Mr. Collins: I usually put in three or four wires in frame and get good worker combs. As a general thing I use a small starter.

H. Rauchfuss: If I was presenting this for any instruction I would make it a point to give the swarm full brood comb, not starters. You cannot force them to fill comb. They are the field bees, will not supply comb unless they are compelled to.

Suggestion has been made to pay the janitor something for his work and also to pay the stenographer for taking down the proceedings.

Mr. Rhodes: I think that Mr. F. Rauchfuss is the only one and I would suggest that a motion be made to the effect that the matter be turned over to him, an order to be drawn on the treasurer for the amount.

Mr. Collins: Motion made and carried that this matter be turned over to Mr. F. Rauchfuss and that we add to that committee Mr. Jouno to arrange this matter.

Motion made and seconded that we adjourn.

FRESH AIR AND FOUL BROOD.

Referring to Mr. Farmer's letter, I wish to state in support of his contention that I have long held the opinion that bee-diseases (and I speak particularly of foul brood) are dependent for their propagation and degree of virulence upon certain conditions outside of the mere presence and existence of the disease germs. I am led to think that in certain localities the disease may be endemic, or perchance simply latent, and that under suitable circumstances the germ may, and does, find congenial ground and scope for its harmful propagation and development. I am also sure, as Mr. Farmer and Mr. Simmins both say, that under certain natural conditions foul brood cannot continue to exist in a hive, and will be extirpated by the bees themselves. And foremost of these conditions I place warm sunny weather, with a good honey-flow, and it is simply astounding what a change can be wrought in a week or two under such conditions. I have had repeated and abundant evidence of the fact which I assert, and have seen a badly-diseased colony not only oust the disease, but also show a good record of honey-gathering the same year, and in the succeeding year lead the way in the whole apiary with no mean take of honey. I believe, as Mr. Farmer evidently does, that fresh, sweet air, bright sunshine, and good food are the best aids to sanitation and the greatest enemies of disease in the world.—Lancelot Quayle, Glenmay, Isle of Man, in British Bee Journal.

DRUDGERY.

Nixon Waterman, in Appleton's Magazine

Dull drudgery; "gray angel of success;"
Enduring purpose, waiting long and long,
Headache or heartache, blent with sigh or song,
Forever delving 'mid the strife and stress;
Within the black confines of your duress
Are laid the firm foundations, deep and strong,
Whereon men build the right against the wrong
The toil wrought monuments that lift and bless.
The coral reefs, the bee's overflowing cells;
The pyramids; all things that shall endure;
The books on books wherein all wisdom dwells,
Are formed with plodding patience, slow and sure.
Yours the time tempered fashioning that spells
Of chaos, order, perfect and secure.

PERTINENT PARAGRAPHS.

Grant Stanley.

It has been pretty well settled that drugs are of little account in the cure of foul and black blood. As to treatment, the McEvoy method seems to be the one most sought. The method of "Alexander the Great," of New York, heralded through the journals some time ago, has not proven what was claimed for it.

You're a beginner, eh? Well, now see here; if there is one question that needs threshing out pretty well, in advance, it is the hive question. It will pay you well to think seriously over this matter in order that you may know to a certainty which hive will suit you best throughout your bee-keeping career, and not do this after you have spent considerable money in them and then want to change. Remember, if hives are well taken care of, they will last a lifetime. Some pretty nice sums have been squandered in this way.

Large hives have their disadvantages, so have small ones. With large hives brood is very apt to become chilled on cold nights, and result in chilled or pickled brood in early spring, and with small hives more swarming may result, but the bees will be more able to take care of their brood. There is no perfect hive. I believe, however, the best hive is one that can be made large or small in a moment, as it can then be adjusted to meet any emergency.

I have a good, dry cellar in which to winter bees, and it can be made as dark as a dungeon, but as long as I can winter successfully on summer stands, I have no desire to change. One thing can scarcely be disputed; that bees wintered on summer stands are more hardy than those cellar-wintered, and will be stronger in numbers at the beginning of the harvest. They will do more breeding all winter and when a day sufficiently warm for flight arrives. they can make use of it.

Nesbit, Pa.

BEES BUILT HOUSE OF HONEY.

Some very novel things have been brought out at fairs this fall, but probably nothing equals the honey house shown at the Interstate fair, held at Kansas City. The model is five feet in length, two in width and three in height. It was made of wood and placed in a very large hive with one of the biggest swarms in the apiary of H. F. Staple, at Rockport, Mo. In 42 days the bees had filled every space of the house with honey, even stopping out the chimney with a comb. The building is a model of Mr. Staple's print shop. He is editor of the local paper at Rockport, and an enthusiastic bee culturist. It is needless to say that the bee house has attracted much attention, and was one of the novel exhibits at one of the biggest fairs.—Pennsylvania Grit.

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THE BEE-KEEPING WORLD

Staff Contributors: F. Greiner, Adrian Getaz

Contributions to this department are solicited from all quarters of the earth

GERMANY.

A newspaper of Mainz tells the following which is in line with Alexander's discovery, that a plurality of queens may be kept in one colony: "Previously it was an indisputed fact that only one queen was at the head of every bee family. But since Prof. Gatter has exhibited a colony of bees which contained two laying queens, concessions must be made. The two queens of the Professor's colony behaved very nicely towards each other, often showing affection for each other.

R. Ostrowski has made some interesting observations regarding sugar feeding. He is preparing the syrup by taking one pound of granulated sugar to one pound of water, which, he says, makes a syrup of the standard sweetening power. Of this syrup he feeds 4 pounds daily till enough has been given. By weighing the colony a few days after feeding he found his colony had gained just half as much in weight as was fed, consequently the gain per pound cost him just exactly what the sugar cost per pound.—from Allgemeine Zeitung f. Bienenzucht.

The general verdict of the German bee-keepers gathered at Frankfurt relative to the golden long-tongued American bee was unfavorable. Even Freudenstein, editor of the Neue Bienenzeitung, who formerly championed the American product, owned up that the German bee was superior, and said that he imported the Goldens only for the sake of the experiment.

Evidently the bee-keeping fraternity of Germany desires to do thorough work when it comes to conducting their meeting, the "Wanderversammlung." There is a general desire manifested to have all subjects which are to come up for discussion published some time before the meeting is held; advanced theories are to be given in full, so that material may be gathered for or against by participants. Contrary to this, among the Americans the no-program theory has been followed to a large extent of late years.

GERMAN EAST-AFRICA

Native Methods.

Bee-keeping as carried on in this tropical colony has been mentioned in these columns several times before. The practices differ in different localities, but all reports agree in as much as bee-keeping is very profitable in all parts. The natives of the Wadjagga tribe along the Kilimandscharo take cuts of suitable logs, hollow them out and hang them to the limbs of the forest trees. It does not take long before they are inhabited by bees. As there is no winter to hinder the work of the insects, the contents of these rude hives are cut out about every three months and carried to the doors of the white farmers who usually give about 35 cents for the contents of a hive which yields in the neighborhood of 25 pounds of honey and one pound of wax. The white farmers, in a measure, have adopted some practices of the natives. They fix up the cases in which kerosene cans are shipped them; one case is used as the brood chamber, another one as a super. The last-named only is fitted up with movable frames and an extractor is used to obtain the honey. To establish an apiary all that is necessary is to set up the hives in some convenient spot. They will soon be inhabited. The African honey bee Apis mellifica Adonsoni is smaller than the German bee, and the thorax is of a reddish color.

The honey these bees gather is darker than the good grades of Europe, very sweet, but not equal to clover honey in flavor. Not a great deal of honey is so far exported, but quite a little of the wax, which is said to melt at a higher heat, and is therefore excellent for comb foundation.

Generally speaking, the prospects of bee-keeping in East-Africa are flattering. The old saying, "Bees and sheep support a lazy man while he is asleep," is as true here as it is anywhere on the globe.—Extract from Allgemeine Zeitung f. Bienenzucht.

DENMARK.

Bee-keeping has made great strides during the last few decades in Denmark as well as in other countries. In 1860 there were about 77,900 colonies kept, nearly all in bell-shaped straw skeps. In 1898 the number had increased to 119,200, of which 71,900 were in movable-comb hives. A frame like the Gallup and American is in favor. The government is making some effort to disseminate the knowledge of rational bee-keeping among the people. The Schleswig-Holst. Bztg, from which this is taken, gives a representation of the apiary of A. Nielsen Kaerchave. This has all the appearance of an American yard. The hives are placed singly at proper distance from each other and are accessible from the top only. The owner commenced bee-keeping in 1890 with one hive; in 1903 his apiary numbered 30 colonies. The largest yield obtained was 2,700 pounds from 24 colonies, the best swarm giving 205 pounds of surplus (probably extracted honey). Nielsen also rears his own queens and he prefers the Italian bee; says he has 40 red-clover queens and considers them superior to ordinary Italians. Other goldens he praises only as very beautiful. The Carniolan bee finds no favor with him on account of its great swarming propensity.

HONEY AND BEESWAX MARKETS.

(Dealers' Selling Prices.)

Chicago, Oct. 19.—Quite a few consignments of honey have been received during the past two weeks. No. 1 to fancy white comb brings seventeen to eighteen cents; off colors, one to three cents less in the wholesale way. Extracted, eight to nine cents for white; amber, seven to eight; Sundry flavors of amber and dark, six to seven. Beeswax thirty to thirty-two. All of the foregoing being governed by quality, style and package in the range of prices. Market active in all grades.—R. A. Burnett & Co.

Toronto, Sept. 14.—The demand for honey is very good, with supply short. We quote our market today: Comb, $2.50 to $3.00 for good. Extracted, 11 to 12½ cents.—E. Grainger & Co.

Cincinnati, Sept. 9.—Since our last quotation there is no material change in the honey market, with the exception that the demand is a little better. As yet, prices have not reached that high point that many people believe they will. Received this week a car load of white comb honey, which we are selling at from 15 cents to 16 cents from the store. This was the first car out of the State of Colorado, and naturally commanded attention which brought many purchasers. Will have two more cars to arrive, which will more than satisfy the demand, and we look forward to lower prices. Extracted honey is moving as lively as can be expected at this season of the year. Quote white clover in barrels and cans at 7 cents to 9 cents, according to the quality. Amber in barrels at 5 3-4 cents to 7 cents. We are paying 30 cents per pound for choice yellow bees-wax, free from dirt, and 28 cents per pound for darker grades.

The Fred W. Muth Co.,
51 Walnut St.

Milwaukee, Sept. 19.—The supply of honey is not large enough, the demand is good. Today we quote as follows: White comb, 17 to 18 cents. Dark, 15 cents. Extracted, 10 cents. Market firm.—J. Offerman & Co.

Worcester, Mass., Oct. 10.—There is a good demand for honey, but none is in the market.—W. H. Blodgett & Co.

Kansas City, Mo,, Oct. 14.—The demand for honey is good, with but fair supply. We are having good demand for best comb and extracted at the following prices: No. 1 white comb, $3.50 per case; amber, $3.25; No. 2, $2.75 to $3.00. Extracted, white, 8 cents to 8 1-2 cents; amber, 7 1-2 cents to 8 cents. Beeswax, 25 cents.—C. C. Clemmons & Co.

Cent-a-Word Column.

DO NOT burn your refuse from Wax Extractor. Send it to me and get your cash. Archie L. Coggshall, Groton, N. Y. tf

AGENTS WANTED—To sell advertising novelties, good commission allowed. Send for catalogue and terms. American Manufacturing Concern, Falconer, N. Y.

FOR SALE—45 colonies of bees, excellent strain, no disease, several hundred hives, foundation mill, dipping tank, Cowan honey extractor and numerous other appliances. Located in Florida. Cheap for cash. Address, S. B. C. Care American Bee-Keeper, Fort Pierce, Fla.

INCREASE is a hadsome little book telling how to form new colonies without breaking working stocks. A simple, sure, satisfactory plan, 25c. Baby Nuclei tells how to mate many queens from sections with a mere handful of bees; 42 pages, 20 pictures, 50c. Cell Getting tells how to save labor in rearing queens, 50 cents. Queen rearing outfits. Golden all-over and Caucasian Queens. Circulars free. E. L. PRATT, Swarthmore, Pa.

WANTED.—No. 1 white and amber and buckwheat extracted honey in 60 lb. cans or barrels. Send sample and quote lowest price delivered in Preston. M. V. Facey, Preston, Fillmore county, Minn.

10,000 FERRETS, Finest strain of stock in the land. Perfect workers. They clear buildings of rats, drive rabbits from burrows. 48 page illustrated book sent free. This book tells how my ferrets have gained a world wide reputation and carefully explains all points in breeding and working these little animals. Send at once for this free book and price list.

SAM'L FARNSWORTH, Middletown, Ohio.

PREMIUMS FOR COLORADO BEE-KEEPERS.

At the meeting of the Committee on Exhibits held March 2, at Denver, the following premium list has been drawn up by the committee and the following list of premiums will be given away at the next meeting of the Colorado State Bee-Keepers' Association. All paid up members are eligible to take part in this contest.

	1.	2.	3.
No. 1. Best Nucleus Italian Bees & Queen in Observatory hives	$3.00	$2.00	$1.00
No. 2. Best Nucleus Carniolan Bees & Queen in Observatory hives	3.00	2.00	1.00
No. 3. Best Nucleus Caucasian Bees & Queen in Observatory hives	3.00	2.00	1.00
No. 4. Largest & best display of bees of various races	5.00	3.00	2.00
No. 5. Best case of white comb honey	3.00	2.00	1.00
No. 6. Best case of light amber honey	3.00	2.00	1.00
No. 7. Best & largest display of comb honey	5.00	3.00	2.00
No. 8. Best display of comb honey to be product of a single colony for the season of 1907	3.00	2.00	1.00
No. 9. Best 50 lb. of white extracted honey in suitable glass jars for retail trade	3.00	2.00	1.00
No. 10. Best display of 50 lb. of amber (light) extracted honey in suitable glass jars for retail trade	3.00	2.00	1.00
No. 11. Best display of granulated extracted honey in small packages	2.00	1.00	.50
No. 12. Best & largest display of extracted honey	5.00	3.00	2.00
No. 13. Best display of 10 lb. yellow beeswax	2.00	1.00	.50
No. 14. Best display of special designs in beeswax	2.00	1.00	.50

We have also drawn up a few rules for the judging of these exhibits which are as follows:

The best case white comb honey, the best case light amber, and the best photograph, exhibits Nos. 5, 6 and 16, to become the property of the Association, the premium to be paid owner of the honey.

In judging bees the correct markings of each race, quietness on the combs, number of bees in the observatory hive, the appearance and general condition of the comb on which they are displayed and the appearance and the condition of the hive in which they are exhibited should be considered in their proper rotation.

In judging white comb honey the grading rules adopted by the State Association should be accepted as the standard. In light amber honey the same rules should apply excepting color, which matter should be left to the option of the judges.

In judging extracted honey the flavor, color and body of the exhibits should be considered first, then the attractiveness of package and arrangement of the display. In granulated honey, flavor, texture and attractiveness of package and arrangement of exhibit should be considered.

In judging beeswax, color, freedom from impurities, and perfection of form to be considered.

	1.	2.	3.
No. 15. Most instructive display of Apiarian Products, and of the various uses made of Honey & Beeswax	$ 5.00	$3.00	$2.00
No. 16 Best Exhibition of Photographs of Apiaries and things pertaining to Apiculture	2.00	1.00	.50

THE COLORADO HONEY PRODUCERS' ASSOCIATION.

Committee on Exhibits,
Frank Rauchfuss,
W. L. Porter,
J. W. Pease,
M. A. Gill,
A. Elliott.

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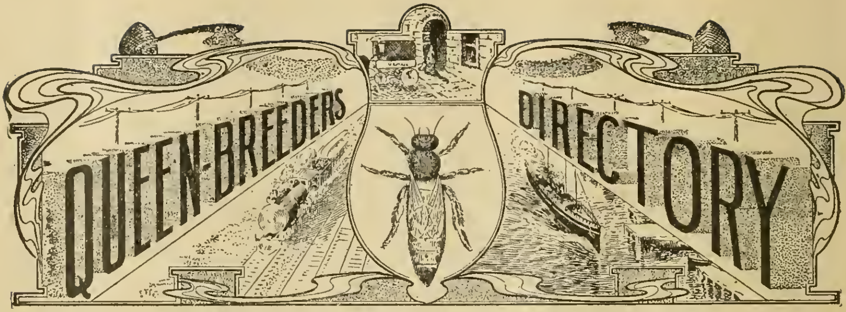

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SECOND.—For Classes 1 and 2 we require a shipment of approximately the amount stated, to be made by the bee-keeper direct to us at Medina. After the prizes have been awarded the honey entered for competition in Class 1 or 2 will be held subject to the instructions of the producer. We will sell it at a five per cent commission or we will ship it to any point direct by freight or express. There being good honey markets in our immediate vicinity as Columbus, Cincinnati, Cleveland, Buffalo, and Pittsburg, it can be disposed of without difficulty at good market prices, and the shipper will not have to lose a good market by shipping it here. Neither the honey awarded a prize nor that which obtained no prize is to be our property, but will be sold subject to the instructions of the producer who sends it to us. We are interested only in inspecting it to award the prizes.

THIRD.—For all honey submitted for prizes we must have a definite statement from the producer regarding the conditions under which it was produced whether a light or heavy flow of honey, how the colony was handled, how many colonies in the yard, from what source produced, etc.

FOURTH.—For Classes 3, 4, and 5, we must, in addition to the above report have the signature of two witnesses certifying to the correctness of the report. If the party who sends us the report for the competition is well known to us we shall not require these witnesses. References may be given instead of the signature of witnesses if desired. All parties intending to compete for these prizes should send for blanks which we will furnish, on which the report may be made out.

FIFTH.—It will be noticed in the last three classes, three to five inclusive, that it is not at all necessary to send us the honey—all we require is a report.

SIXTH.—We reserve the right to limit the number of awards in each class, or to make no awards in a class if there are no satisfactory entries for the same.

SEVENTH.—No contestant will be awarded more than one prize in each class, but may make two entries if desired—one in Class 1 or 2, and another in Class 3, 4, or 5.

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Class 5.—For best report of general results from use of Danzenbaker hive.

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DECEMBER
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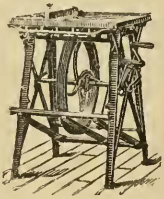

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THE REVIEW FOR 1907

It is impossible, in this space, to touch more than briefly upon a few points. Perhaps the leading feature of the year is a series of articles by E. D. Townsend. Mr. Townsend has been a specialist for many years, probably

MAKING MORE CLEAR MONEY

out of bees than has any one else in Michigan. You may have read occasional articles of his scattered through the different journals, but in the Review for the present year he began at the beginning and wrote in a consecutive manner—just as though writing a book. One article, showing the comparative cost of producing comb and extracted honey, is especially valuable just now when some are thinking of abandoning the production of comb honey.

Another man, whose experience and success have probably equaled Mr. Townsend's, Mr. E. F. Atwater, of Idaho, has furnished the Review with several articles the present year. If asked to give the key-note of these articles, I should say that it was the control of increase, or

PREVENTION OF SWARMING

Perhaps the most satisfactory plan was the use of the Dudley tube; a very simple device that not only prevents swarming, but there is no dividing, no shaking, no absconding, no sulking, and no scattering to other hives, but BIG RESULTS.

Another successful specialist, who has been a frequent contributor, is Mr. M. V. Facey, of Minnesota; and I think the most helpful feature of his writings is that of trying to tell his readers how to

DIAGNOSE INSIDE CONDITIONS

of a colony by outside symptoms. Many bee-keepers think they must open every hive and take out all of the combs before they can know the conditions of the apiary. It is wonderful, as you will admit after reading these articles, that an apiary may be managed with so little work—so little opening of hives.

A strong feature of the Review is its editorials. By actual count, 276 have appeared this year. They are helpful, inspiring and encouraging—often the result of

ACTUAL PERSONAL WORK

in the apiary. The Northern Michigan Apiaries and their management are delightfully pictured with both pen and camera, and have brought forth more enthusiastic praise than any feature of the Review for several years. It is a record of ACTUAL WORK, with hundreds of colonies—the failures and success. Two editorials deal at length with "Simplicity in Hive Construction," showing how the editor made hives and frames, and wired the latter and filled them with sheets of foundation, all the work being done at home and at low cost.

What the Review has been in the past, it will be in the future—a real help to practical bee-keepers who are in the business to make money. Send me $1.00 and you will get the Review for 1907 and 1908; and after you have read it these two years I feel sure that you will become a life-long subscriber. For $2.00 I will send you the Review for 1907 and 1908 and also a copy of the book "Advanced Bee Culture."

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THE AMERICAN BEE-KEEPER

Entered at the Postoffice, Fort Pierce, Fla., as second-class mail matter.

Vol. XVII. DECEMBER, 1907. No. 12.

THE COST OF FEEDING FOR WINTER STORES.

ALLEN LATHAM.

DURING the session of the Connecticut Bee-Keepers' Association this fall, some one put this question: "How many pounds of sugar should it take to make ten pounds of winter stores?" Without considering the loss attending the feeding of sugar syrup, the writer suggested 7 pounds of sugar as equivalent to 10 pounds of honey. He was at once disputed, and rightly; for though there may be as much food value in seven pounds of dry sugar as in ten pounds of honey or syrup, there is not the same actual value. The bee-keeper who had asked the question finally arose and stated that he had fed a colony something like fifteen pounds and in the course of two or three weeks discovered, to his surprise, that the hive had gained only five pounds in weight.

The question and the discussion of it caused me to become interested and set me to investigating. It was necessary for me to feed some fifty colonies this fall, and I had planned to feed each about ten pounds of dry sugar, feeding in the five to three ratio. To be safe, I decided to feed 12 1-2 pounds of sugar to each. In the five of sugar to three of water ratio this means about twenty pounds of syrup to each, syrup thin enough to cause rapid removal by the bees and yet thick enough to avoid over-stimulation.

The feeding was done very expeditiously, every average colony taking care of the two gallons of feed in forty-eight hours. This ratio means twenty-five ounces of sugar made into a quart of syrup, as anyone will find by trial, so that 12 1-2 pounds of sugar furnished two gallons of feed.

I chose three colonies of average strength which I weighed just previous to the feeding, and also just two weeks after the second day of feeding. This lapse of two weeks allowed ample time for the curing of the syrup, so that it is fair to say that all loss due to feeding could by that time be easily shown.

The three hives weighed respectively 75, 75, and 65.5 before feeding, and 89.5, 89, and 79 at the second weighing. The gains respectively therefore were 14.5, 14, and 13.5 pounds. If we assume that each colony had the right to consume one pound of stores (whether fed or not) during the two weeks, the actual gain would be 15.5, 15, and 14.5.

It will thus be seen that winter stores resulted which in weight surpassed the amount of sugar fed, a result which is highly gratifying, better than I had anticipated. I had always assumed that when I fed ten pounds of sugar I gave ten pounds of feed, whereas I now know that when I feed ten pounds of sugar I furnish more than ten pounds of feed.

It will now be asked: How can you reconcile your results with those described in the meeting? I cannot assert with absolute confidence just what caused the great loss sustained by the bee-keeper mentioned above, but I should hazard a guess that he had fed the colony at a season when they were stimulated into active brood-rearing. When bees are stimulated thus they use up fuel rapidly, not only to heat their hives, but also in unwonted activity. In my own instance the colonies were in most cases not stimulated even to egg-laying, though they did reach the point of polishing off a small brood nest for the occupancy of the queen. There was a great scarcity of new pollen at this time (the latter weeks of October) and it is well known that bees cannot be stimulated into brood-rearing upon sweets alone. It is possible, too, that the colony which caused such a shrinkage in the food given was a colony of bees unprofitably restless.

I am of the opinion that it is generally advocated to feed bees at a season which for this locality is too early. Prepare your bees for winter in September, the sages all say. I never have prepared mine till well into October, and often not till November, and my success in wintering is such that I make the bold statement that one should winter his bees with as equal confidence as he winters his farm stock.

If there is a fall flow, feeding in September is a foolish waste of sugar and labor. If there is no flow of honey then the feeding should be for stimulation, and not for winter stores. So that in either case the winter-feeding should be postponed till brood-rearing has ceased, and preferably till all brood has emerged. Then the feed should be given in such way that it will be taken and stored within about forty-eight hours. If feeding is thus practised, a very large percentage of the feed will be quietly stored in the brood nest where much of it will be capped over. What is not capped over will be largely consumed before the severest winter weather sets in. This plan brings the bees upon sealed stores after their last autumnal flight.

I was not satisfied with the above experiment, and so I set two small lots of bees to storing their winter stores in combs of their immediate building. About a quart of bees were put into a box about 8 by 5 by 5 inches, and made to fill this box with sealed stores. One of these nuclei has completed this work. The hive and bees weighed at the start three pounds ten ounces, and at the close (at which time the box was full of beautiful comb of sealed syrup) weighed seven pounds five ounces, a gain of three pounds eleven ounces. Not a bad gain when one considers that the little colony had to secrete its own wax and keep up the necessary temperature for comb-building. The box was carefully protected from cold wind and frost by means of old carpets. A second box was prepared with even greater severity. The first had begun to build comb and had been fed two or three days before the experiment began. But the second nucleus was given a box which was empty except for three small starters of comb. The bees to supply this box were themselves empty, and lean; and numbered about 3,500. The box alone weighed one pound fourteen ounces, and with the bees two pounds and eight ounces. Thus there were ten ounces of lean bees. Lean bees number much more to the pound than do fat ones, say, from 6,500 to 7,000, while fat ones number probably not much, if any, over 3,000 to the pound.

This experiment is not yet complete, but the box is practically filled with comb, and the combs nearly filled with syrup, the capping-over being largely uncompleted. Every indication points to a result which corresponds closely with the other, though with a slightly lower percentage of winter stores for the sugar-fed.

Now, as to the amount fed. I fed five pounds and thirteen ounces of sugar to the first nucleus. This sugar built the combs of the hive and furnished three pounds and eleven ounces of winter stores.

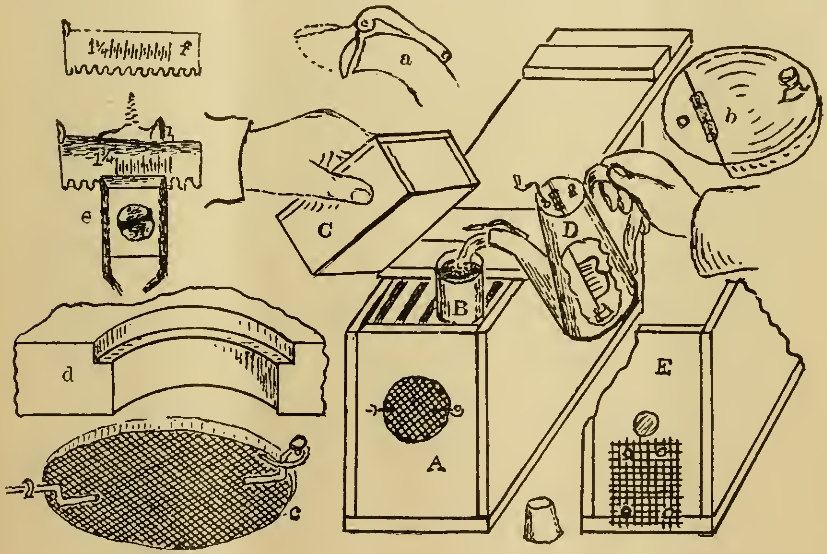
To understand these results—results which are likely to be astonishing to those bee-keepers who argue a great loss in feeding syrup,—one must take into consideration the condition under which the feeding was done. I have outlined those above, and need only call your attention to what you have doubtless already reasoned out. These bees during this feeding are staying at home and keeping as quiet as a newly hived swarm. They are making no pretence to rear brood, and bring nothing from the fields whatsoever. All their energy is focused on taking care of those jars of syrup.

Norwich, Conn., Nov., 1907.

REARING QUEENS AND FEEDING NUCLEI.

C. W. DAYTON.

THE ONLY remedy for the lack of love for queen-rearing is queen-rearing. We should rear queens anyway. Rear them in spite of yourself. Make it become a habit. When the habit is formed it will be transformed into love for queen-rearing. Twenty-four years ago I began to rear queens by the scientific method devised by Mr. Alley. The previous season I spent much time dipping larvae into naturally constructed cell cups with a toothpick. From that day to this I have been adding to my stock of knowledge. Just last year I unearthed one of the finest nuggets yet brought to light. I had realized, or, I may say, almost dreamed that the nugget was there—and it was; but I never had been in the right position to make its discovery complete.



In the year A. D. 1901, I took the job of Italianizing an apiary of 125 colonies for a neighbor. From that time until 1906 they were allowed to do their own requeening. The owner of this apiary lives some fifty miles distant. At the beginning of the honey harvest he wrote to me to visit his apiary to see when he would need to come to do the extracting. The first colony I examined about one-half of its brood was dead. Of about forty colonies examined that day, there were none that did not have a large share of their brood dead. I noticed also that in the long rows of hives every one which contained a full colony had a cluster of bees on the front of the hive the size of a man's hat. It was so every day almost, regardless of the weather. In my own apiary I could not find one dead larva, and there were not a quart of bees clustering out. Yet my hives were only one-half as large as his. When I removed the covers to his supers there were only a few scattering bees scampering about the combs in the upper stories. The way the bees scampered showed that conditions were not right. They acted as if they were there for a last look. The upper stories of my hives were closely packed with bees which boiled over the sides of the supers as soon as the covers were taken off.

It is my opinion that my neighbor's bees clustered out on account of the stench which the dead brood sent up. Although they were started in pure Italian stock in 1901, in 1906 there was not one colony of pure Italian, and hardly a vestige of Italian markings in most of the colonies. They had fallen off in color and size, and from the indications, quality kept pace. It is not so easy to discern the difference in working qualities. But the bee-keeper of from twenty to thirty years' experience should have some cultivated perception.

Since the close of the honey harvest there have been numerous small swarms floating about this locality, clustering on bushes, fences, and frequently approaching the neighborhood of the apiary. I have hived about 20 of these truant swarms. When I found them early enough that a new queen could be given them, tney remained in the hives and did fairly. When they were not given a new queen, about two-thirds of them swarmed out to continue their course of rambling. Sometimes they returned to their own hive, and sometimes tried to enter other hives, or remained clustered on bushes. These swarms always contained a fertilized queen, so it must have left the hive queenless from whence they came. I have tried wintering these queens and they seldom amount to more than the keeping of a very backward colony or nucleus.

And I judge that the bees know it, so they swarm out to take chances. The queen is only slightly better than a worker, indeed, if sometimes they are not quite so good. About enough like a queen to swarm and cluster and keep them together while traveling. When they settle down and begin to think and meditate on the future abilities of such a queen, courage fails. It shows what kind of colonies neighboring bee-keepers are tolerating. Where I gave about fifteen of these swarms a new queen, this and last season not one swarmed out again.

There is no place where we can get better pay for skill than in the rearing of queens, and we can rear as good or better queens by artificial methods than by natural swarming or any let-alone plan. We must make queen-rearing a part of our systematic operating. Do it in its time, and spare no pains. Be as regular and as exact and unfaltering as the sun which rises in the east. That is the only way to keep with the world if we are to be an integer. It has become fashionable to go ahead in a sort of rattle-to-bang way. It has no merit in it. It could succeed only by work doing itself. It will work finely, but there must be brains behind the machine. Not all work, nor all study, nor all let-alone. There must be a balance for the body while we are reaching for the dollars.

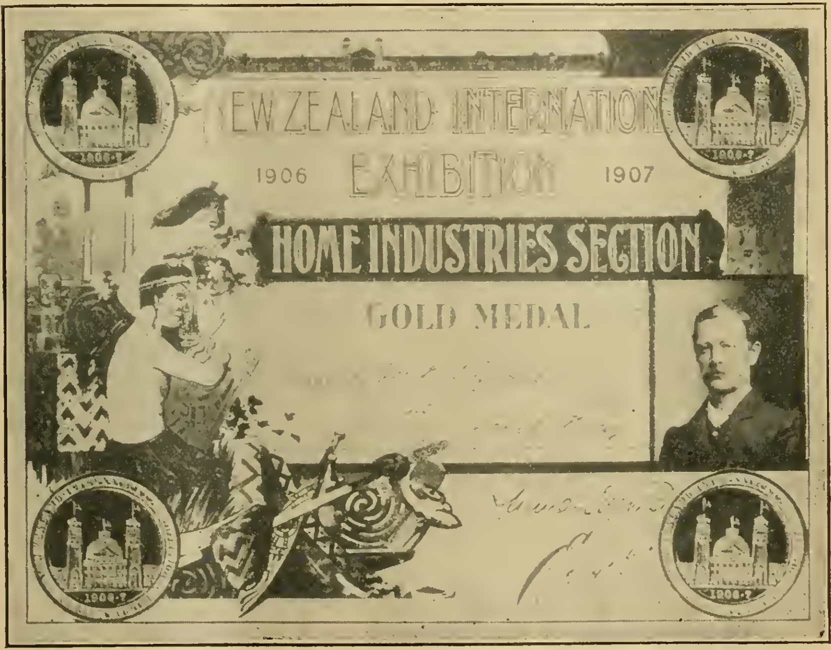
The best time to rear queens is during the short space of time directly following the close of the swarming season or honey harvest. The colonies chosen to construct cells should be those which have queens a year old or more, and usually colonies which have not swarmed. This is the season when the colonies are most in the mood of having a queen. The swarming season and fever is over, they are then prepared to settle down to business of preparing for winter, and the presence of a good and suitable queen is the first and all important item. If we remove a queen from a colony after the swarming season, they go about the rearing of another with an increased degree of anxiety over any other time. If we make them queenless a second time, they will rear another, with still greater haste and anxiety than before, but each succeeding time they will choose older larvae and nurse the larvae in such haste that poorer queens will be the result. We must look after this part of the operation ourselves.

This energy or anxiety on the part of the bees is the high to be prized property. It causes the queens to be of larger size and better laying qualities. It depends upon how the bees desire a queen as to how good the queen will be. At this season there is the least variation in the queens from a single batch of cells. The cell-building colony must be fed one and a half pounds of feed per day for ten days or more before starting cells, and the nuclei must get a half pound a day for a few days, and that this feeding may be done with the minimum of labor and time is the excuse for this article.

Immediately above the letter A is a screen. This is to keep the hive cool in hot weather, and it also attracts to it any robber bees which may be nosing about in quest of a load of feed. It draws them far away from the entrance. At E is the entrance, a 7-8 inch auger hole, and the cork near by with which the entrance can be closed if necessary. Below the entrance is a square of screen wire tacked to the hive for the bees to travel on. At E is shown the expansion bit, and at F the change necessary to be made in order to adapt it to the purpose of forming the ledge and resting place for C. It is done with a ten-cent file. The wire lugs are carefully fastened with solder.

A is the hive in which the feeding is to be done. B, the feed receptacle, into which the bees climb to get the feed, and which is covered with the light box C. D is an especially devised feed pot made of galvanized iron so as to last. It is not unwise for the bee-keeper to provide himself with a few handy utensils, as well as for the wife to completely arrange her kitchen. He is obliged to have a smoker, an extracter, and sections; but there are other things as necessary, though less prominent in appearance, so that he is prone to get along with a few makeshifts. But makeshifts are expensive things to use.

Chatsworth, Calif.



NEW ZEALAND INTERNATION

1906 EXHIBITION 1907

HOME INDUSTRIES SECTION

GOLD MEDAL

A PROGRESSIVE NEW ZEALAND APIARIST.

Of late, New Zealand has been making great strides in things apicultural, and among those who have acquired distinction as progressive and wide-awake apiarists, Mr. H. J. Gardiner, of Christchurch, occupies a prominent place. Above is shown his portrait, and a reproduction of four medals, three silver and one gold, awarded to Mr. Gardiner for his display of extracted honey—the only medals awarded in the Home Industries Section of the International Exhibition. Mr. Gardiner has been a subscriber to the American Bee-Keeper for many years and is, therefore, well informed on apiarian matters of the whole world, and, as attested by these awards, his knowledge is intelligently applied.

WILL MEET THIS MONTH.

To the readers of The American Bee-Keeper:—

The bee-keepers of St. Lawrence and Jefferson counties, N. Y., will meet in annual convention at Watertown, December 16 and 17. All who are interested in bee culture are invited to attend and help to make this meeting one long to be remembered.

Very truly,
Geo. B. Howe, Sec'y.

Black River, N. Y., Nov. 15, '07.

MR. MUTH IN TENNESSEE.

On September 25th, 26th and 27th, I had the honor to be judge of the apiarian department at the Tennessee State Fair, and believe I filled the bill, so to speak. Formed the acquaintance of some fine fellows, and a number of good bee-keepers.

Several days ago I mailed you a photograph of Mr. J. M. Davis, of Spring Hill, Tenn., his son and apiary. The son, whose name I can not now recall, is indeed a bright, wide-awake young man, and I predict a promising future for him. Mr. Davis has some of the finest three-banded Italian bees that I have ever seen. His advertisements do not do his stock justice. I am sending you under separate cover another view of Mr. Davis' apiary (photo No. 1), showing a unique and picturesque bee yard.

Mr. Leslie Martin, of Lebanon, Tenn., carried off the first prize for his strain of Caucasian bees. By the way, Mr. Martin was in the employ of the Apicultural Department at Washington for a number of years, and is now recognized as one of the brainiest bee-keepers in Tennessee. Without a doubt, it is but the question of a short time when his name will be synonymous with J. M. Davis, and Moore, of Morgan, Ky. He is a young man of some twenty-three or twenty-four years of age, but is strictly business.

Mr. J. M. Buchanan, of Franklin, Tenn., had a remarkable display of comb honey at the State Fair, and I am sending you a photograph thereof. The artistic arrangement of his fine comb honey, clear and bright extracted honey, beeswax, bee hives, full frames of honey, etc., carried for him the highest honors with comparative ease. I am also sending you a neat picture (photo No. 3) of a corner of his apiary. Mr. Buchanan is the secretary of the Central Tennessee State Bee-Keepers' Association; has been in the honey business for the past four years, and has captured numerous prizes for comb honey, beeswax and bees. His enthusiasm along the bee and honey line has brought him remarkable success.

The fair was a grand success throughout, and I am really pleased that the honor of being judge was bestowed upon me.

Sincerely yours,
Fred. W. Muth.

PART OF APIARY OF J. M. BUCHANAN. FRANKLIN, TENN.

The more I see of men the better I like my bees.

RELEGATE THE BOX-HIVES.

BURTON N. GATES.

A RELIC of our forefathers' days, like the treasured "blue dishes" on the side-board or the pewter plates and mugs which adorn the dining room, has come down to us in the bee yard. Our grandfathers, and in fact, most of our fathers knew of nothing better to hive bees in than what we now designate as the old-fashioned or box-hive. To be sure, it was a great improvement upon keeping bees in straw skeps, or in logs, or "gums," as they were called; but since we now have a convenience in the frame-hive, which is as superior to the box-hive as china dishes are to pewter or wooden plates and cups, why in the world do we not place the old box-hives (a veritable nuisance and menace to progress) on the shelf with the other relics and antiques of our forefathers' day?

Like most antiques, as is known to the collector, the box hives are numerous in relation to the early date of the settlement of the country; consequently they are largely confined to or found in the eastern and particularly the north-eastern United States.

I was recently asked to prepare a paper for the Massachusetts Board of Agriculture, which would tend to promote the apiculture of that section of the country. In considering my subject in "Bee-Keeping—Some Suggestions for Its Advancement in Massachusetts" (Burton N. Gates, Bulletin, Massachusetts Crop Report, August, 1907, pp. 26-36), I decided that there are two fundamental forces impeding progress in apiculture. One force, which is at work unbeknown to most bee-keepers, and which is wiping out hundreds of colonies annually in north-eastern United States alone, is disease. I know you don't like to think of such a pessimistic thing, and what is more, it is not my purpose or privilege to speak of it here. The other force is the box-hive.

Many a time, in talking with the progressive bee-keepers in Massachusetts, which may be considered typical in many respects of the industry in the older part of the United States, have I heard it said, "Oh, if we could only get rid of the box-hives and the

HOME APIARY OF JOHN M. DAVIS, SPRING HILL, TENNESSEE. (See Page 270.)

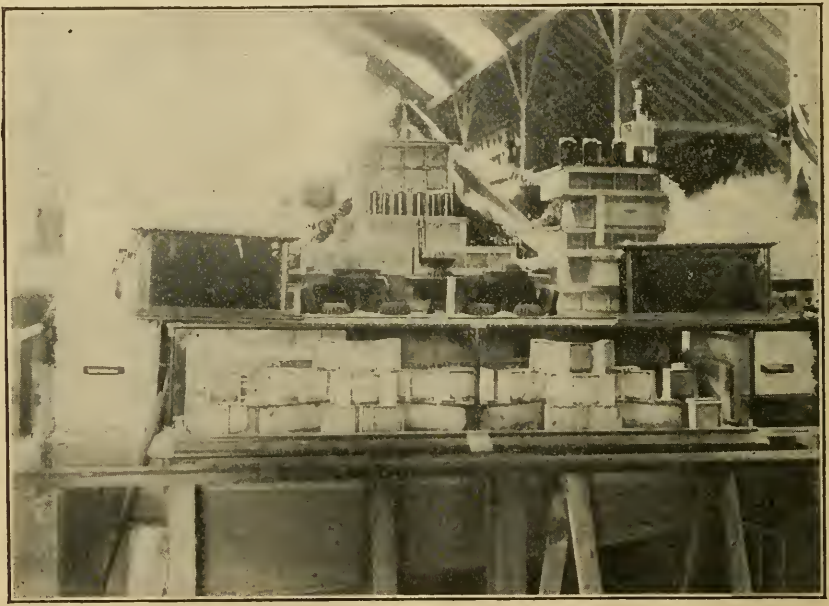
box-hive bee-keeper." Just so; if we could, there would be a change not alone in the thrift of the industry, but in the profits. You who cling to the old way of getting what honey there chances to be in the compartment at the top of a box-hive, or rely on "sulphuring" a colony in the fall in order to get enough honey to last the winter through, are doing yourselves an injustice, as well as the bees.

But the question remains. These remarks will, in all probability, not reach the man who has any box-hives, for I know my readers are progressive, feel as I do, and would not tolerate an old-fashioned hive around.

Therefore it remains with you individually and collectively to eradicate the nuisance and count yourself as a promoter in apiculture. If you know of any of these old hives in your vicinity, see to it yourself that they disappear next spring; see to it that the bees are properly transferred to frame hives. It will even pay you to buy up the antiquated hives and transfer them for yourself, if the owner has no interest in the matter. One way to promote the spirit and the industry is to present your opinions before the farmers at their institutes and farmers' club meetings this winter; another way, is to publish in the local papers, how detrimental to successful bee-keeping a few box-hives are in a neighborhood. But it rests with you—I would emphasize it again—you must take the steps, individually.

There may be some doubt in your mind, why there is such a hindrance to bee-keeping progress in a few box-hives. In the first place, the bees are handicapped; the farmer is not getting the returns due him. Aside from this, the box-hive is impossible to manipulate; it may be putrid with disease, and no one the wiser. Just here consider the menace to a community of bee-keepers; what a source of infection, a hot bed of contagion. This one factor is sufficient to warrant annihilation of the box-hive.

Can we not, then, by individual effort bring to the attention of everyone who is antiquated in his ways of keeping bees, to the man who says he "only keeps a few bees for family use," the necessity of using frame-hives, if not for his own good, for



DISPLAY OF J. M. BUCHANAN, TENNESSEE STATE FAIR, 1907. (See Page 270.)

the good of his neighbor bee-keepers? Give (to the needy man) advice how to transfer or, better yet, help him to perform the operation next spring. If this is not convenient, communicate with the editors of the several bee journals, or others who are competent, and they will gladly help you. At all events, begin now to look about and see what is to be done.

Let us soon see the box-hives with the broken tea-cups on the shelves.

Worcester, Mass.

PROFITS OF BEE-KEEPING.

A. C. MILLER.

FROM THE BEE-Keepers' Review for October I copy the following "statement" by Mr. E. D. Townsend, of Remus, Michigan, being as far as it goes, one of the most comprehensive yet published.

COMPARATIVE RESULTS IN EXTRACTED AND COMB HONEY PRODUCTION.

THE COMB HONEY YARD.

84 colonies at $4.50	$378.00
16 empty hives and combs at $2.50	40.00
300 supers complete at 50c.	150.00
Tools	10.00
1 honey house	50.00
Total capital invested	$628.00
Interest on Capital invested	$ 37.68
Wear and Tear	37.68
Rent and taxes	9.00
3,000 sections	13.00
30 pounds foundation at 54c.	16.20
150 shipping cases	22.00
18 outside crates at 40c.	7.20
Work (estimated)	75.00
Traveling expenses	20.00
Total expenses	$237.76

CREDITS.

2,300 lbs. comb honey at 15c.	$345.00
1,000 lbs. extracted honey at 8c.	80.00
15 lbs. wax at 30c.	4.50
30 new swarms at $1.50	45.00
Total receipts	$474.50
Expense items	237.76
Profits	$236.74

Per cent. of profit on capital invested, 37 2-3 per cent.

EXTRACTED HONEY YARD.

84 colonies at $4	$336.00
16 empty hives at $2	32.00
170 upper stories and combs $2	340.00
1 four-frame extractor	20.00
Tools	10.00
1 honey house	50.00
Total capital estimated	$788.00
Interest on capital invested	47.28
Wear and Tear	47.28
Rent and taxes	9.00
42 cases of empty cans at 50c.	21.00
Work (estimated)	25.00
Traveling expenses	20.00
Total expense	$169.56

CREDITS.

5,000 lbs, extracted honey at 8c.	$400.00
50 lbs, wax at 30c.	15.00
5 new swarms at $1.50	7.50
Total receipts	$422.50
Expense items	169.56
Profits	$252.94

Per cent of profit on capital invested, a little over 32 per cent.

Total income from both yards	$897.00
Total expense items	407.32
Total profit	$489.68

Total per cent. of profit on both yards, about 34 1-2 per cent."

As given by Mr. T., the results of the season's operations with the two lots of bees, aggregating 168 colonies, show a very fair per cent. of profit on capital invested, but to me the statement appears incomplete and the conclusions erroneous. He says capital invested, $1,416. How about the cash ("working capital") used in buying supplies, paying taxes, traveling expenses, etc., to the tune of $137.40? Also the "help" must needs be paid, for be it owner, son, or hired man, they must live, and that takes some cash which adds $100 to the "working capital." The labor item is misleading. The son spent three months at the job, and the father approximately two weeks, for all of which he charges but $100. Because they had time to fish or cut bait does not alter the case, for they could or did do no other profitable work there, hence all the days spent at the yards must be charged at a full day's pay. A capable young man who knows the business he is at work at—as the son does in the above case—can command in commercial life $15 a week, or, if at a skilled trade,—and he is skilled at this trade—from $3 to $4 a day. But call it $15 per week, and we have his labor costing for the thirteen weeks $195. And surely his father, with his abilities, can command twice what the son does, or $30 per week, provided his talents were used in lines of his greatest efficiency; hence, we should figure his labor at $60, making a total increase in the labor item of $155. Then there is a little item of insurance which will approximate $5. The interest on the "working capital" amounting to $23.84, together with the revised "labor" item, increases the total expense by $183.84 Now let us revise Mr. T.'s figures:

Capital in plant.......	$1,416.00
Working capital	397.40
Total capital	$1,813.40

Total Income	$897.00
Total expense	591.16
Net income	$305.84

Profit on the investment of about 18 per cent.

But it should also be noted that no allowance appears for cost of selling, for even if the prices he quotes are net returns, it surely cost him in labor something to sell it. To me his item of "wear and tear," figured at 6 per cent., is too low. Stated differently it means that his plant is good for 16 2-3 years, or that if he sets aside each year for maintenance and renewal 6 per cent. of the cost of his plant, it will, at the end of 16 2-3 years, be as good as it is now. But will it?

Then there is a nice little item of "bad debts" which now and then arises. Others of the hazard of disease, the elements, of exceptionally bad years when heavy feeding, which means more working capital, is needed. In other words, the item of "wear and tear" should either be increased, or another one called "sinking fund" should be established to cover the items just referred to.

Either Mr. Townsend and his son must keep bees enough so that the business will engage practically all of their time, or else find some other way to increase the net returns on the capital invested, if the business is to "pay," for 18 per cent is not enough to cover the hazards of such a business over a series of years and leave a satisfactory margin. Investments in good "industrial" stocks yield from 8 per cent. to 15 per cent. and more, and with no attention or care on the part of the investors, and surely a business entirely under the management of the owner should yield as great a net return on his investment, as well as pay him a proper salary. If it does not, then he had better change his investment and go to work for some one else.

The foregoing is written solely to show the need of full and careful "accounting" in figuring the "profit and loss" of the honey-producing business.

Providence, R. I.

MR. GREINER'S REPORT.

Naples, N. Y., Nov. 4, 1907.

Friend Hill:

Our bees here seem to be in fair condition for winter, but we have hardly been able to make up the last winter's losses, which, on account of poor winter food and unfavorable spring weather, had been uncommonly heavy. The general result has not been unsatisfactory, considering the condition the majority of colonies were in last spring. In fact, I am surprised that I have obtained as good a crop as I did. One outyard, with bees badly run down, gave me 80 pounds of comb and an increase of thirty-five per cent. Of course this was the best. My home yard did rather poorly with scarcely any increase.

Prices obtained were slightly better than in previous years. I sold f. o. b. at 15 1-2 cents, for white; 13 1-2 cents for amber, and 11 cents for dark and buckwheat.

Most of my bees are ready for the winter. Some are not yet packed, and 40 colonies will have to be moved home yet to be placed into cellar.

Sincerely yours,
F. Greiner.

NEW YORK STATE BEE-KEEPERS' CONVENTIONS.

A series of bee-keepers' meetings will be held in this state as follows:

Mt. Morris, December 9.
Canandaigua, December 10-11.
Auburn, December 12.
Syracuse, December 13.
Fulton, December 14.
Watertown, December 16-17.
Amsterdam, December 18-19.
Albany, December 20.
Glens Falls, December 31.

Mr. Chas. Stewart, of Sammonsville, N. Y., has been designated as Conductor, and he will be present at all of the meetings.

The annual meeting of the New York State Association of Bee-Keepers' Societies will be held at Amsterdam, December 18-19.

All interested in bee-keeping are invited to attend these meetings.

C. B. Howard, Sec'y.
Romulus, N. Y.

THE CONTROLLING OF SWARMS.

A SUBSCRIBER asks that I give, in connection with the subject of the economics of apiculture, a description of the hive I used and my method of controlling swarming.

Most of my hives are regulation ten-frame dovetailed hives, with five-and-one-half-inch depth supers which latter take either boxes or extracting frames as I choose. One apiary has hives composed entirely of the aforementioned supers using two or more for a brood chamber, on the "divisible brood chamber" plan. Bodies and frames are bought from supply dealers, but covers and bottoms are now made by a local box factory. The bottoms are regulation style.

Newer covers are merely thin, cleated boards, some are commercial "super covers," over all telescope covers made of paper, which are wind and water proof, cheap, light and reasonably durable. Hives and supers are well nailed and painted, but I think I shall omit paint on supers as they are never exposed to the weather.

Frames are well nailed, the L frames wired, and fence separators are clinch-nailed, all of which permits ready cleaning by immersion in boiling lye, a labor-saving expedient of much value. All hives are on racks or stands one foot above the ground.

The points aimed at were best material and work in vital points—i.e., bodies, supers and insides, and low cost on covers and bottoms where exactness and fine stock are not so vital. I realize that this latter statement is not in harmony with current teaching, but it fits my conditions. Covers and bottoms are good, and used as I use them, I consider it wiser to have them made cheaply at a box factory rather than buy the more expensive but no more useful or durable ones from the supply makers. I have all sorts of covers and bottoms in use, but now have settled on the simple ones described.

My method of controlling swarming is hard to define. First my strain of bees are not prone to swarm, which may account for my success in my manipulations. All supers, comb or extracting, are put on from one to three weeks before the harvest begins, and some sort of super is on all through the season. Hereabouts we may get a heavy flow at most any time during the season and the policy of an always present super saves many a pound of honey. It is particularly advantageous in out apiaries which are often seen only at long intervals. Furthermore, colonies to which the supers are given so far ahead of the harvest are very much less inclined to swarm than are colonies not so treated. I cannot explain why, only I know that with me it is a fact. As it works the same with hybrids as with Italians, I surmise that there is some reason for it. If when at an apiary I notice any colonies preparing to swarm, I "force" or "shake" them after well known methods.

All queens are clipped before they are introduced and if a swarm issues in my absence the queen is usually lost in the grass and the bees returning, settle down to business and accept one of the young queens. Now and then a swarm departs, but the loss does not begin to equal the cost of preventing it. It took me a long time to find that out, but I am now convinced that such is the case.

Arthur C. Miller.
Providence, R. I., Nov. 11, 1907.

MAYBE THIS MEANS YOU.

This number closes the seventeenth volume of The Bee-Keeper, and the last month in which subscriptions are offered at 25 cents a year in advance. Arrearages must be paid at the regular price, 50 cents per year, but during December, when all arrearages are paid up, we will accept 25 cents a year in payment for future volumes.

By the way, there is quite a large number of subscribers who have allowed their subscription accounts to fall behind, and upon all such we urge a prompt remittance to balance, and respectfully solicit an additional enclosure in advance payment for at least one year at our special twenty-five cent offer, which expires this month.

The Irish Bee Journal says the ravages of foul brood in that country this year have been more widespread than in any previous year within its memory. The agricultural department now contemplates taking steps to deal compulsorily with the malady.

DRONES FROM FERTILE QUEENS.

SAM'L SIMMONS.

TRULY, as you say in your issue of October, "where ignorance is bliss 'tis folly to be wise," and I may say I am in complete accord with Mr. G. M. Doolittle upon this matter of drone progeny. For more than 30 years I have never wavered in my conviction that a mismated queen will produce hybrid drones, and no other.

I, therefore, stand shoulder to shoulder with Doolittle, and smilingly take unto myself such scattering abuse as you see fit to heap upon him in regard to this question. Cheer up, Brother D., only bide a wee; where folly was bliss it has been thought ignorant to be wise; but some pet theories may presently be sadly shaken.

Now, dear editor, the facts are already marshalled in battle array, and when they are unfolded to view, they will be found unassailable, convincing, and satisfactory. Your humble servant knows just a little about the organs of the drone and queen; he has dissected only a few hundreds, and many while in close association with one of the greatest masters of bee-anatomy—microscopically and otherwise.

Broomham, Heathfield, England,

Nov. 1, 1907

I am sorry to have to oppose Mr. Simmins' position on the matter of the drone progeny of mismated queens. As I stated in the article to which he replies, I consulted some of the world's highest authorities on parthenogenesis and they were unanimous in stating that the mating of the queen had no effect upon her male offspring.

Until queen breeders can know with certainty the ancestry of their queens for many generations back, they cannot rightfully make such assertions as those of Mr. Doolittle and Mr. Simmins. So long as the queens mate in the open air it is impossible for the queen breeders to know to a certainty the male with which they mated, and without that knowledge, they cannot say that the queen was raised from a pure mother. Mr. Simmins has made such wonderful advance in practical apiculture by his leaving the main traveled way, and the results of his progress have rightfully given him such confidence in himself, that it is not to be wondered at that he believes his conclusions in the matter of queen mating are beyond question.—Associate Editor.

THE RIPENING AND MATURING OF HONEY.

An Important Subject to Bee-keepers.

On the second day of the Waikato Winter Show, Mr. I. Hopkins, Government apiarist, delivered the following address to the members of Waikato Bee-keepers' Association at Hamilton:—

The subject of the short address I am about to give has been set down as the "Ripening of Honey," but I think a more appropriate title will be the "Maturing of Honey," as this will include everything that should be done to have our honey in the very best form for placing on the market, and I know you will agree with me that this should be our aim, for the better our product is the larger will be the demand for it.

Percentage of Water in Honey.—All honey, whether it is what we term ripe or unripe, contains more or less water. In its ripe condition it contains the least. According to the authorities I have looked up, it may range between 12 and 23 per cent. On page 286 of "Thorp's Dictionary of Applied Chemistry," the maximum, minimum, and average amount of moisture in twenty-five varieties of honey examined are given as follows:—Maximum, 23.26 per cent.; minimum, 12.43 per cent.; and the average of the whole, 19.3 per cent. You, as practical bee-keepers, will readily understand under what conditions we get the most moisture, that is, when honey is being stored in close, damp weather, or, in other words, when there is much moisture in the atmosphere; and, as a matter of course, we get the least in dry weather. You are also aware that honey containing an excess of moisture is bound, sooner or later, to ferment. Now, just where that excess commences I confess I do not know, and, so far as my investigations have gone—and I have looked up many authorities—I have not yet seen anything more definite than that stated, that honey usually contains from 12 to 23 per cent. of moisture. This is a matter best decided in a chemist's laboratory, being beyond the accomplishment of the average bee-keeper, and need not trouble us, as we can get at all we want to know in this connection by very simple means, as I shall point out directly.

Importance of Maturing Honey.—It is of vital importance to the individual bee-keeper, and to the industry generally, that all honey should be well matured or ripened before it is placed on the market, so that there may be no risk whatever of its fermenting afterward. In order that you may thoroughly realize this, I may tell you that in the course of my travels I have come across quite a number of samples in a state of fermentation, some of them with the owners' names on the labels. These packages had been placed on the market, and, of course, had to be condemned. Those brands, you may depend, would be tabooed in that district or market ever afterward. We now come to the method of maturing honey, the principal feature of which is to make certain that our product does not contain an excess of moisture. As I said just now, the average bee-keeper cannot, by direct means, find this out; but by testing our honey for its specific gravity we shall be able to ascertain what we want to learn, and this is a very simple matter, as I shall explain shortly What has seemed extraordinary to me is, that, considering its great importance, nothing, to my knowledge, has ever been discussed of a practical nature on the maturing of honey in any of the bee literature that has come under my notice. I have all the standard works on bee culture, and have read all the principal bee journals for the past thirty years, but beyond the mere statements that honey should be ripe before being put up for market, there has been nothing. I do not wish it to be understood that what I am going to say is to be taken as the last word on the subject—far from it, for it will take considerable time yet before we have arrived at that stage. My aim is to get our associations and practical bee-keepers generally interested in the matter, so that they may assist me in making tests, that we may eventually arrive at some trustworthy knowledge of the matter, instead of working, as we are now doing, in the dark, or by rule-of-thumb.

Ripening Honey Inside and Outside Hive.—I care not whether we follow the practice of leaving the honey in the hive until it is all capped over before extracting, or extract it before this stage and ripen afterward; we still need some means of clarifying it and testing it for its ripeness, as the case may be. For myself, I am convinced, and prepared to risk my reputation upon it, that honey can be as well ripened outside the hive as within it, and that it is only a mechanical process in either case—the getting rid of the surplus moisture by evaporation. I am very pleased to be able to state that I carried out this method of ripening honey outside the hive on a large scale twenty-four years ago (at Matamata, in 1883), and that my first experiment was with ten tons, and with complete success. The enormous saving that this method means over that of ripening the honey inside the hive, in the way of extra material, time, labor, the control of swarming, and the larger crop of honey, can readily be estimated by practical bee farmers. I am also pleased that such men as Alexander, Professor Cook, and T. W. Cowan, proprietor of "The British Bee Journal," advocate the same method.

Need of Shallow Maturing Tanks.—The absolute requirement in any case for the proper maturing of honey is a shallow tank, in which it should remain for a time after extracting, while the atmosphere around it should be warm and dry. In this way the surplus moisture will evaporate, and the fine particles of pollen and wax, that it is impossible to catch in the strainers, and also the air bubbles (that within themselves may contain moist air) may rise to the surface in the form of scum and be taken off. In this way, and I believe in this way only, can we properly mature our honey and get it into the best form for market. It has been urged by two bee-keepers I was discussing the matter with some few days ago, who were using deep cylinder tanks, that the ripe honey, being heaviest, sank to the bottom, and the moisture is forced to the top. This sounds very well in theory, but is not correct in practice, as can be readily proved by mixing honey and water together, when they will not entirely separate afterward. Air bubbles and foreign substances that run into the tank with the honey cannot possibly rise to the surface through a deep body of it, and the same applies to much of the moisture; hence, in many cases it is run off into the marketing packages in an unmatured condition, with the result that, even where there happens to be no excess of moisture, a nasty scum rises to the surface in the tins, which is not at all enticing to the purchaser.

Depth of Tanks.—As to the best depth for tanks, opinions may differ, but my own is that they should not exceed twenty-four inches; but I prefer them twenty inches, and as big as you like superficially. Probably some of you may remember Mr. Alexander, in one of his articles, when speaking of the depth of his tanks, considered they were too deep. They were thirty-six inches, and he intended reducing them to thirty-two inches, so he is not in favor of deep tanks.

Testing Honey for its Ripeness.—To come to the matter of testing honey for its ripeness. I spoke to you a short time ago about testing it for its specific gravity, that is to find out its weight as compared with water. You will fully understand the matter when I explain the experiments I have just been carrying out in a series of tests with various samples of honey obtained by myself in retail packages from different merchants in Auckland and Waikato, specimens of which are here before you. So long as the instrument is correct, there is no more certain method of testing for ripening than by the hydrometer, an instrument which you are all, no doubt, more or less familiar with, and which is most simple in its use.

Authorities on the Specific Gravity.—The different authorities I have looked up vary largely in the figures given as to the specific gravity of honey. For instance, in the "British Bee Journal" for 1885 (December), the editor, in reply to a correspondent, gives figures ranging all the way from 1.261 to 1.450, obtained from various works, but gives it as his opinion that 1.350 would be a conventional standard for ripe honey, although he remarks that clover honey, in a dry season, is found to be 1.370. "Thorpe's Dictionary of Applied Chemistry," page 287, gives the specific gravity as from 1.439 to 1.448; while "Encyclopaedia Britannica" gives it as 1.410. So you see there is a big difference, and therefore we get very little assistance for our purpose from these figures; consequently we must rely chiefly upon our own observations. With regard to the tests I have made, I went through the twenty samples very carefully indeed, some with a Twaddell's and some with a Fletcher's hydrometer, after testing them together and finding them alike. The readings varied, the lowest registering 1.350 and the highest 1.430. It was very noticeable that the better the honey the greater the specific gravity. The average of the eleven samples that went 1.400 and upwards was 1.410 10-12ths, and most of them were firm and dry, while those below were more or less moist, although all were granulated—one, at 1.385, had just started fermentation. The conclusions I have arrived at over the tests are, that all those registering 1.410 and upwards were thoroughly ripe, and would keep for any length of time under ordinary conditions. Those between 1.400 and 1.410, if not so ripe, would keep for a long time; but all those registering below 1.400 seemed to me to be doubtful in this respect. I shall keep specimens of each as you see them for testing by time. Now, what I wish you all to do is to obtain the apparatus yourselves, that is, each individual, and try for yourselves, so that you may learn to know for a certainty when your honey is ripe, and not depend upon guesswork. The appliances, hydrometer, glass, and thermometer, only cost about 7-6 in all, so that they are within the reach of all of you; at all events the matter is one of so much importance that if they cost six times as much you ought to have them. Be sure also when making tests to record them all for future reference, or they will be of very little use to you. Make tests of the honey directly it is extracted, and on each day afterward. A set of instruments will be kept at the state apiaries, where tests may be made by any bee-keeper.

Heating Honey-House at Night.—Before concluding, it may be well to mention a suggestion that was made to me the other day by your president and Mr. Hutchison, and one that I entirely agree with, that is, that some means should be adopted for heating the honey-room at night in changeable weather while the honey is maturing. Sometimes the nights are exceptionally cold, and starts the honey granulating prematurely, and means should be taken to prevent this. Some one of the modern kerosene stoves would be very suitable for this purpose, and would cost very little indeed for upkeep.

Testing for Making Vinegar and Mead.—I should also like to draw your attention to another use for the hydrometer. In the making of vinegar, mead, etc., out of the washings of cappings, broken honeycombs, etc., we are told usually to test the strength by the floating of a new-laid egg, or sound potato, which is another rule-of-thumb business. The right proportions of honey and water to make vinegar is one and a fourth pounds of honey to each gallon of water. In this test glass I have put them in that proportion, and you see the hydrometer gives the specific gravity as 1.040, so that, knowing this, you can easily make correct tests of any washings you may have without there being any guesswork about it. The right proportions for making mead are 4 pounds honey to the gallon of water, so that by mixing half a pound of honey in a pint of water you will have the correct proportions for ascertaining the specific gravity for mead.

A number of questions were asked and answered by the lecturer.—New Zealand Farmer Stock and Station Journal.

THE REASON WHY QUEENS IN CAGES BECOME SMALL.

M. A. Wathelet says in Le Rucher Belge that if a queen is removed from a colony where she was laying, and with abdomen expanded with eggs is placed in a cage, the abdomen will by degrees diminish in size as the eggs are dropped. After a few hours, as she no longer receives the digested and stimulating food produced by the workers, she becomes very small, and after twenty-four hours is no larger than a virgin queen, and is incapable of recommencing egg-laying until she has passed some days in a colony. If in the spring a laying queen is replace by a queen that has been confined in a cage, the bees easily notice the change, and her introduction will be difficult. It is quite different if the queen to be introduced is taken out of the colony where she was laying. In such a case the change is hardly noticed, and with the precaution of guarding against robbers, a little smoke, and powdering the bees with flour, the introduction is easy. Queens reared in nuclei in the same apiary are always accepted, whereas those coming from another apiary are not always, notwithstanding all the precautions taken. From this it will be seen that the best time for introducing a queen that has come in a cage is when queens have ceased egg-laying, say, after September 15, because the size of the stranger will be about the same as that of the queen which is to be replaced, and the bees will not be surprised at her not laying eggs.—British Bee Journal.

BEE KEEPING IN MORAVIA.

Abbe F. Adamec states in L'Apiculture Nouvelle that in Moravia (Austria) the number of bee-keepers has doubled from what it was at the end of last century, and increases daily In 1906 there were in Moravia 95,329 colonies of bees, of which 66,317 were in hives with fixed combs, 4,226 combined hives (hives with movable supers and brood-chamber with fixed combs), and 24,785 movable-frame hives, mostly of the Berlepsch type, a form that was adopted in 1866. During the last four years the American type of hive has been introduced, as well as the Dadant-Alberti. The former is used out of doors, and the latter in bee houses or pavilions. In order to use the American type of hive in bee houses, a professor, M. Edouard Hirube, turns the entrance to one side, making the hives like ours, with frames running parallel to entrance, and he considers them more handy for the bee-keeper to manipulate. Moravia comprises three-fourths of the Slav nation. There is a monthly journal devoted to bee-keeping, Pcelar Moravska, which advocates modern methods of management.—British Bee Journal.

Do you think or do you only think you think?

CHOSEN BITS FROM LONGFELLOW MUCH LOVED.

Look, then, into thine heart, and write:

—

A boy's will is the wind's will,
And the thoughts of youth are long, long thoughts.

—

Whene'er a noble deed is wrought,
Whene'er is spoken a noble thought,
Our hearts in glad surprise
To higher levels rise.

—

All things come round to him who will but wait.

—

Trust no future, howe'er pleasant!
Let the dead past bury its dead!
Act!—Act in the living present!
Heart within, and God o'erhead!

—

For time will teach thee soon the truth,
There are no birds in last year's nest.

—

Standing with reluctant feet,
Where the brook and river meet,
Womanhood and childhood fleet!

—

Like Dian's kiss, unasked, unsought,
Love gives itself, but is not bought.

—

No one is so accursed by fate,
No one so utterly desolate,
But some heart, though unknown,
Responds unto his own.

—

God had sifted three kingdoms to find the wheat for his planting.
The lovely stars, the forget-me-nots of the angels.
When she had passed, it seemed like the ceasing of exquisite music.

—

As unto the bow the cord is,
So unto the man is woman;
Though she bends him, she obeys him,
Though she draws him, yet she follows,
Useless each without the other.

—

The love of learning, the sequestered nooks,
And all the sweet serenity of books.

—

The hooded clouds, like friars,
Tell their beads in drops of rain.
Then stay at home, my heart, and rest;
The bird is safest in its nest;
O'er all that flutter their wings and fly
A hawk is hovering in the sky;
To stay at home is best.

—

For age is opportunity no less
Than youth itself, though in another dress;
And, as the evening twilight fades away,
The sky is filled with stars, invisible by day.

—

And the night shall be filled with music;
And the cares that infest the day
Shall fold their tents like the Arabs,
And as silently steal away.

—

There is no death! What seems so is transition;
This life of mortal breath
Is but a suburb of a life elysian,
Whose portal we call death.

The Commissioners of Agriculture of the Southern States were in session last week, in Columbia, S. C. It is not to be taken for granted that all these officials are, or have been, farmers. Too many are simply politicians who have sought office for the emoluments thereof. One commissioner, who viewed the agriculture of the South through a cotton lens, declared that, if the culture of cotton was eliminated from the South its agriculture would be eliminated; which is arrant nonsense. Does the South raise nothing but cotton? Is its soil incapable of producing other crops? Are Tennessee lands—from which the commissioners hail—good only for cotton? One would not think so, when he "urged the education of the youth of the land to the end that the South would utilize the superiority of the soil and climate of the South in the raising of its own provisions and supplies." Somehow the two ideas conveyed in these remarks do not dovetail. These annual conventions that are attended mainly by men in official stations, who make high sounding speeches about educating the young up to higher standards of agricultural meeting, do very little good in the way of practical results.

THE BEE-KEEPING WORLD

Staff Contributors: F. Greiner, Adrian Getaz

Contributions to this department are solicited from all quarters of the earth

AUSTRIA.

Pine Honey and Winter Stores.

Sidelights of Herr Bassler's bee-keeping. Sugar-feeding an advantage for wintering. Herr B. says about his bee-keeping: "I live in the city (Prag), but migrate to Iglau where the bees have access to pine forests and heather. A year ago we had a remarkable honey flow from these sources, and the bees worked strongly during the morning and evening hours on the pines. In four days the supers were filled so they could scarcely be lifted. I had to extract eleven times from my best hive. The honey from the pines, etc., is very dark and unwholesome, causing dysentery among the bees. It is imperative that this may be removed, or the bees will suffer. Some time ago I advised a bee-keeper of limited experience to remove this honey from half of his hives and substitute sugar, leaving the rest as they were. He reported that the difference in these differently treated colonies could be plainly seen before winter was half over. The sugar-fed hives showed not the slightest uneasiness, while the others were restless and developed the dysentery. The former lost almost no bees and came out strong, the latter dwindled.

It is claimed sometimes that sugar is degenerating, but I have practiced sugar-feeding for forty years. I usually feed ten pounds of sugar to each colony every fall, and my bees are still vigorous. One colony has been fed 28 pounds of sugar each fall for six succeeding years, and is still alive—yes, one of the best I have. Sugar is perfectly safe to feed; boughten honey not always, as it may contain disease germs.

GERMANY.

The Frankfurt Exhibition.

As usual, the meeting of the German bee-keepers at Frankfurt was accompanied by an exhibition of hives and implements; among them were strawskeps. A most attractive exhibit was the house apiary on wheels for seventy-two colonies, constructed and owned by Wolfgarten.

A la America.

At the meeting of the Pfalz. bee-keepers' society at Kirchheimbolanden, comb honey in regular sections was shown by Geo. Mueller, and Editor Reidenbach encourages this enterprise by saying that such honey which brings a high price should be produced more extensively; especially heather honey should be so produced, for this honey is of such body that it cannot well be extracted.

Freudenstein, editor of the "Neue Bienenzeitung," does not claim to have been the first one to suggest sugar feeding, but claims to have first discovered that dysentery may not only be prevented by feeding sugar syrup, but also that it is cured after the bees have become affected.

JAPAN.

According to "l' Apiculture Nouvelle," bee-keeping in Japan is carried on after American fashion, for the reason that the Americans have been their nearest teachers. The representation of a Japan apiary in the Schwz. Bztg. has all the appearances of an American yard.

SWITZERLAND.

The report of the bee-keepers' convention at St. Gallen, September 22. and 23., is exceedingly interesting to the gleaner. It shows that the bee-keepers in Switzerland are of a progressive kind. The interest that the common citizens in these old-country towns take in such doings is surprising and also speaks well for them and their hospitality.

Herr Kramer mentions the Alexander method of keeping a plurality of queens in single hives, in "Schwz.

Bztg," but says that it is contrary to nature and thinks that this soapbubble will soon burst.

Kramer sums up queen-breeding in this fashion: The absence of a scientific basis the American breeders show in their adopting more and more refined methods and short cuts. On the other hand our aim has been to breed in the most natural and simple manner. The gain that we have made is much more satisfactory than the Americans can show. According to Dr. Phillips, the average yield per colony has not been raised within forty-five years, and really the Americans do not yet know what they want, whether yellow bees or black bees; the latest fad is the Caucasian bee. It would be unwise to look to America for imports to improve our bees here. Our bees have been acclimated for thousands of years, and we improve by selection, not by haphazard crossing.

Kramer also condemns sugar-feeding in queen-breeding as having a tendency to weaken the race. Only strong colonies under the swarming impulse and not tampered with are used in Switzerland to rear queens.

Our editorial office, Fort Pierce, Fla., wants good articles, and also good apiarian photographs for publication, and pays cash upon publication for all worthy material. Let us examine anything interesting that you may have in this line.

OBADIAH BROWN HADWEN.

The Worcester County Bee-Keepers' Society has recently met with the loss of one of its esteemed members in the person of Mr. Obadiah Brown Hadwen.

Mr. Hadwen was one of the founders of the Worcester Horticultural Society, of which the Bee-Keepers' Society is a branch. He was for years one of the Park Commissioners of the City of Worcester, and to him the city is largely indebted for its finely shaded streets and beautiful parks, one of the best of which he gave to it.

He was always interested in anything pertaining to agriculture. It was the writer's pleasure to have Mr. Hadwen escort him over the ground of his beautiful estate on the heights of Worcester and have him point out and explain the beautiful collection of trees and shrubs, most of which were planted with his own hand and it was difficult to believe that some of the giant trees could have been grown in one man's lifetime.

Mr. Hadwen was a courtly gentleman of the old school, possessed a fund of humor and was an enjoyable and entertaining companion. He will be greatly missed by those who knew him and it will be long ere they fill his place.

A. C. M.

Don't be a mirror—good ones are costly and easily broken.

A LAUGH IN CHURCH.

She sat on the sliding cushion,
The dear, wee woman of four;
Her feet, in their shiny slippers,
Hung dangling over the floor.
She meant to be good; she had promised,
And so, with her big, brown eyes,
She stared at the meetinghouse windows
And counted the crawling flies.

She looked far up at the preacher,
But she thought of the honeybees
Droning away at the blossoms
That whitened the cherry trees.
She thought of a broken basket,
Where curled in a dusky heap,
Four sleek, round puppies, with fringy ears
Lay snuggled and fast asleep.

Such soft, warm bodies to cuddle,
Such queer little hearts to beat,
Such swift, round tongues to kiss,
Such sprawling, cushiony feet;
She could feel in her clasping fingers
The touch of the satiny skin,
And a cold, wet nose exploring
The dimples under her chin.

Then a sudden ripple of laughter
Ran over the parted lips
So quick that she could not catch it
With her rosy finger-tips.
The people whispered, "Bless the child,"
As each one waked from a nap,
But the dear, wee woman hid her face
For shame in her mother's lap.

—Our Dumb Animals.

Going to keep bees next year in the same old way? Why?

THE

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The editors and the publishers join in extending best wishes for the coming festive season to each and every member of The Bee-Keeper family.

The National Convention held at Harrisburg, Pa., in October, was not largely attended, but some of those present say it was "interesting." (H.)

It is much easier to put foundation into sections when it is fairly stiff from cold, not so as to be brittle but just hard and firm, so put in your foundation this winter. If all sections are covered up so no dust can get in, the foundation will be just as good next summer as if put in the day the supers are put in the hives. (M.)

Even the United States is a big country, and no set rule will work out the same under the variable conditions that obtain in the widely different locations of the United States, to say nothing of the big, round world for which so many apiarian rules are formulated by writers with a conception only of their own immediate section. (H.)

We earnestly invite our readers to take part in the discussion on the economics of apiculture. We desire all the information possible on the subject so if you have any facts on the cost of installing or running an apiary, cost of selling honey, cost of raising queens, etc., send them in. Give us your opinion as to what things are essential and what unnecessary. (M.)

In the recent death of the Honorable Ledyard Bill, Massachusetts lost one of her unique bee-keepers. His intolerance of anything which savored of unfairness oft resulted in spicy and characteristic remarks and his occasional presence at the meetings of apiculturists always lent interest to the occasion. He was prominent in the affairs of the state and rendered it valuable service. (M.)

Sam W. Lewis, one of Rhode Island's veteran bee-keepers, recently died at his home in Apponaug. Mr. Lewis, for many years, was the most extensive bee-keeper in the state, and his exhibits of honey at the fairs, etc., were large and attractive. His apicultural methods were simple but effective, and marked him as a genius in that line. His business of a nurseryman gave him a wide acquaintance and his bluff and hearty manner won him many friends. (M.)

The Fred W. Muth Company, Cincinnati, report an active business in honey. Mr. Muth, the president and manager of the firm, being an apiarist himself, is very much in sympathy with the producers and keeps in close touch with the fraternity. Fair dealing and promptness in remitting for shipments purchased is a hobby with the company, as it has been with preceding generations of the Muth family engaged in the honey business; and this characteristic is doubtless largely responsible for the success of the house. (H.)

We wish to call particular attention to the article in this issue by Mr. Latham. His explanation of the when and why of feeding for winter is most complete and we surmise that much of it will be new to most of the veterans. But we still insist that the novice, the careless man and the procrastinator had better do or begin to do the work earlier than the time given by Mr. Latham. The skilled operator can work with bees without harm to them when the novice cannot. Furthermore, the skilled one will be sure to do the work wisely, thoroughly and quickly. Other folks must begin earlier or spring will overtake them. (M.)

Are hive stands worth while or is it better to have the hives set on bricks or stones? The writer has tried both ways and now has all hives on racks the tops of which are one foot above the surface of the ground. The bees do better and the work of caring for them is less arduous. The racks are merely rectangular frames made of spruce boards six inches wide by one and one-quarter inches thick. Into each corner of the frame is nailed a leg, sometimes made of a piece of 2x2 scantling, twelve inches long, sometimes merely a twelve inch piece of the same material the racks are made of. Some racks take two hives, others take four or six, in which latter case a cross piece and extra pair of legs are put in the middle. Make some this winter and try them. (M.)

In the November A. B. K., Mr. Braun asks how to get pollen from the combs so that it can be used in some sort of drink. Clean combs containing it may be crushed in cold water. The pollen will settle and the wax flakes will rise. It is easier to get it before it goes into the combs. Push a hive forward on the bottom board until front of hive and bottom are flush. Close the space at back of hive with a board. Across the entrance fasten a sheet of queen-excluding zinc, having the openings placed vertically instead of horizontally. Place a pan or dish to catch the pollen for nearly every bee will lose her load. The hive should be high enough from the ground to permit the pan to extend a little under the bottom. The pollen should be disposed of every night, because it moulds or ferments quickly. The fact that it ferments so readily is probably what gives it its value in the use to which the man puts it. (M.)

Editor Root, of "Gleanings," seems to be an easy mark for nature fakers. If it isn't bees' heads for ramrods it is catnip, and if it isn't catnip, it is something else. His latest misfortune is to give fulsome praise to a lot of photos of combs extolling them as fine examples of the habits of the bees. Special attention is drawn to the elongated "attachment cells," and to a "beautiful" example of comb "built against glass." Every one of the combs were built from foundation put in wrong way up and the resultant shapes of the attachment cells are abnormal. As for the comb built against the glass one has but to look at the picture to see the fragments of broken cell walls where the comb was cut. The thin edges of cell walls shown are cut edges. A bee cannot "build" such an edge, producing such only when tearing down. Furthermore, when attaching comb to glass it is always done in a lumpy manner, broad irregular masses of wax marking every cell wall. We trust that Mr. Root will change his mind and not put the misleading pictures in his text book. (M.)

Mrs. Geo. W. York, wife of the editor of the American Bee Journal, Chicago, died October 14, 1907. The sympathies of the apiarian fraternity are with Mr. York in his bereavement.

PASTURAGE.

In connection with the economics of apiculture, the matter of pasturage has an important part. The better the pastures, the greater the number of colonies which may be kept in one locality, which in turn lessens the cost in labor and travel.

In our last issue we referred to Dr. Brooks' successful experiments in fertilizing old pastures for the purpose of obtaining clover crops for pasturage or for hay. The results of his work should appeal directly to farmers and poultry raisers, and if such, in the neighborhood of apiaries, can be persuaded to follow the practice, it will be of mutual advantage to them and to the bee-keeper.

Another form of pasturage which might be possible to the bee-keeper running his own farm is the sowing of mustard with his grain crops. It is doubtful if the average farmer can be persuaded to do anything of the kind unless he is also a honey producer, for the farmer looks upon mustard as a noxious weed.

The writer has an apiary located on a farm, the soil of which is somewhat clayey and which produces a strong growth of most all vegetation. Each year the farmer has several acres of oats and invariably there springs up a heavy growth of mustard with the oats. This is very much to the farmer's displeasure, but he frankly confessed that it caused him no harm or financial loss.

The mustard ripens and drops its seed before the oats are harvested, and he says that his crop of oats are satisfactory and he cannot see that it is in any wise effected by the presence of the mustard. The honey from this source is a bright golden color, good body and flavor but inclined to be a little stingy. It is not, however, unpleasant. The yield seems to be uniform one season with another, and during the past year when nothing else was yielding, two and one-half acres of this plant, growing in with oats, supported fifteen colonies of bees and yielded about 150 pounds of surplus honey. Without this source of supply the bees would have had to be fed, for there was absolutely nothing else obtainable. (M.)

NON-SAGGING FOUNDATION.

During the editor's recent Northern trip he spent a few hours in counsel with the foreman of the foundation factory of the W. T. Falconer Mfg. Co., at Falconer, N. Y., and as a result we are firmly convinced that the sagging problem has been effectually and permanently settled, without the use of wires or other troublesome additions to the wax sheet. We have been giving much thought to a solution of this perplexing problem for some months, and we are more than pleased with the present status of the matter. Machinery for experimental work has been constructed and the goods turned out are exactly as anticipated in appearance and construction. We believe the "sagging" era is about to become history, and to be met there only. (H.)

ANOTHER RAMBLER.

Mr. Thos. Chantry, whose home used to be in South Dakota, is becoming noteworthy as a traveling apiarist. He is one of those fellows who do things, and his enterprise is winning success. Much of the time he is producing honey out in California, or circulating among the apiaries of other Pacific States; but he travels extensively in the region of the Dakotas and Iowa, where the pure honey of the "Western Honey Producers" is placed through the retailers of that country. The Western Honey Producers is an organization of which Mr. Chantry is president, Edward C. Brown, secretary and treasurer, and W. P. Southworth, manager; and, we believe, has headquarters at Sioux City, Ia. Our readers will probably have the privilege of reading some interesting contributions from Mr. Chantry's pen, dealing with phases of apiculture that he has met in his rambles. (H.)

ESTIMATING OUR PROFITS.

Elsewhere in this issue is an article on the profits of bee culture. The very loose methods of estimating the returns from the business have resulted in harm to persons engaged in it. The free and easy way may do for the persons who turn otherwise idle time to profit by caring for one or a few colonies, and such estimates may make good advertising copy for persons engaged in exploiting the business that they may sell supplies, etc., but the man keeping bees for his bread and butter should know definitely whether he is or is not employing his time to the best advantage. The pleasure it yields, the health it brings, and the freedom and time for travel or recreation, must not be considered until it is known whether or not a fair return is being received for the time, labor and capital involved. If a man has no one dependent upon him or if he has outside means he may be able to ignore these things but otherwise he should know just what he is earning that he may intelligently determine if he shall continue the business or change to some line which will return more for the benefit of those dependent upon him. (M.)

Begin the New Year with a clean, plain-colored wrap on your paper. If you owe for your subscription, this number will be received in a red wrap. This means that the publishers are expecting your remittance at your earliest convenience, and especially desire that the amount necessary to square your subscription account may be received before the end of the closing year.

HONEY AND BEESWAX MARKETS.
(Dealers' Selling Prices.)

Denver, Oct. 28.—So far as we know all comb honey available for carload shipments has been shipped out of the State. We have nearly a carload on hand and more to come in, so as to make a car, but may hold this for local trade. We are in the market for extracted honey and solicit offers with sample. The demand is quite good at present. We quote our market today as follows: Comb. No. 1 white, $3.25 to $3.50. Light amber and No. 2, $2.75 to $3.00 per crate. Extracted, white, 7 1-2 to 8 1-2 cents. Light amber, 6 3-4 to 7 1-2 cents. Colorado Honey Producers Association.

Chicago, Nov. 8.—The honey market is quiet, with offerings increasing. No. 1 to fancy brings 17 to 18 cents, but other grades are difficult to sell at from 2 to 5 cents per pound less. Extracted, 8 to 9 cents for white, with ambers and dark ranging from 6 to 7 cents per pound. Beeswax, 30 cents per pound. R. A. Burnett & Co.

Cincinnati, Nov. 8.—Owing to the unsettled condition of finances throughout the country, causing much uneasiness and anxiety among the buyers, we look forward to seeing honey reach lower values in the very near future. We are at a loss to say what prices we will ask in 10 days hence, but at this writing we are quoting extracted amber honey in barrels at 6 to 7 1-2 cents; fancy white extracted in 60 pound cans at 10 cents; and strictly fancy white comb honey, (which is moving slowly), at 16 1-2 to 18 cents, according to the quantity purchased. For choice yellow beeswax, free from dirt, we are paying 30 cents per pound, delivered here. The Fred W. Muth Co., 51 Walnut St.

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Satan finds some mischief still for idle bees to do, and they have just memory enough to keep doing it.

Cent-a-Word Column.

DO NOT burn your refuse from Wax Extractor. Send it to me and get your cash. Archie L. Coggshall, Groton, N. Y. tf

AGENTS WANTED—To sell advertising novelties, good commission allowed. Send for catalogue and terms. American Manufacturing Concern, Falconer, N. Y.

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SAM'L FRANSWORTH, Middletown, Ohio.

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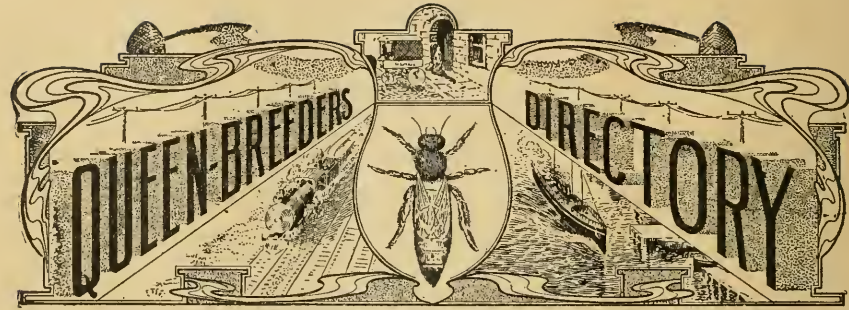

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DANZENBAKER PRIZES

It is to be regretted that so many bee-keepers are satisfied to produce year after year a very ordinary grade of honey as regards its appearance, when by a little more care, and having more suitable fixtures, and by taking the honey from the hive at just the right time, a much larger percentage of "fancy" or "extra fancy" honey could be produced, which would sell at a much higher price. The experience of honey-merchants generally is that there is no difficulty in disposing of large stocks of fancy or extra fancy, even when the market is dull. It is the inferior grades that suffer most at these times. We believe, too, that bee-keepers would be very much better satisfied with their season's work if their best efforts were made to produce a really fine product. To increase further the interest in extra fancy honey, the following prizes are offered for honey produced in Danzenbaker hives during the year 1907, under the following conditions:

FIRST.—As above stated the honey must be produced in a Danzenbaker hive, either the present style or any Danzenbaker hive that has been put out within the last few years. These hives may be had of any dealer in bee-keepers' supplies in any part of the country.

SECOND.—For Classes 1 and 2 we require a shipment of approximately the amount stated, to be made by the bee-keeper direct to us at Medina. After the prizes have been awarded the honey entered for competition in Class 1 or 2 will be held subject to the instructions of the producer. We will sell it at a five per cent commission or we will ship it to any point direct by freight or express. There being good honey markets in our immediate vicinity as Columbus, Cincinnati, Cleveland, Buffalo, and Pittsburg, it can be disposed of without difficulty at good market prices, and the shipper will not have to lose a good market by shipping it here. Neither the honey awarded a prize nor that which obtained no prize is to be our property, but will be sold subject to the instructions of the producer who sends it to us. We are interested only in inspecting it to award the prizes.

THIRD.—For all honey submitted for prizes we must have a definite statement from the producer regarding the conditions under which it was produced whether a light or heavy flow of honey, how the colony was handled, how many colonies in the yard, from what source produced, etc.

FOURTH.—For Classes 3, 4, and 5, we must, in addition to the above report have the signature of two witnesses certifying to the correctness of the report. If the party who sends us the report for the competition is well known to us we shall not require these witnesses. References may be given instead of the signature of witnesses if desired. All parties intending to compete for these prizes should send for blanks which we will furnish, on which the report may be made out.

FIFTH.—It will be noticed in the last three classes, three to five inclusive, that it is not at all necessary to send us the honey—all we require is a report.

SIXTH.—We reserve the right to limit the number of awards in each class, or to make no awards in a class if there are no satisfactory entries for the same.

SEVENTH.—No contestant will be awarded more than one prize in each class, but may make two entries if desired—one in Class 1 or 2, and another in Class 3, 4, or 5.

The classifications for the prizes are as follows:

Class 1.—For best shipment of 200 lbs. of comb honey in Danzenbaker hive.
Class 2.—For best case of comb honey in Danzenbaker sections.
Class 3.—For best report of yield from single colony in Dazenbaker hive.
Class 4.—For best report of yield from five colonies in Danzenbaker hives.
Class 5.—For best report of general results from use of Danzenbaker hive.

For each class there will be ten prizes as follows:

First.—$10.00.
Second.—$7.00.
Third.—$5.00.
Fourth.—$2.00.
Fifth to Tenth.—$1.00 each.

Five Classes.
Ten Prizes for each Class.
Fifty Prizes in all.

This is the time to decide to enter this competition. No matter where you live, whether in the United States or elsewhere, you can certainly find one class in which you can make an entry; and as there are ten prizes in each class we believe that no one will be greatly disappointed in the results unless it is ourselves, and we hope that we shall not be, but see a large number of entries. Even if you fail to get a prize, you will doubtless have increased the value of your own product by your efforts to produce some big results or an extra quality of honey.

The A. I. ROOT CO., Medina, Ohio